Understanding the Early Years

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Early Childhood Development in Winnipeg (School Division No. 1)

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Executive Summary

Understanding the Early Years (UEY) is a national research initiative. It provides communities with information to enable them to make informed decisions about the best policies and most appropriate programs for families with young children. It seeks to provide information about the influence of community factors on children's early development and to improve the community's capacity to use these data in monitoring child development and creating effective community-based responses.

This report is one of five community reports describing children's outcomes and explaining them in terms of three factors: family background, family processes, and community factors. Children's outcomes were assessed in three major categories: physical health and well-being, cognitive skills, and behavioural measures.

Each evaluation comprised several measures.

- *Family background* includes information on the parents' income, level of education, and occupational status.
- *Family processes* include positive parenting practices, engagement in learning activities, family functioning, and maternal mental health.
- *Community factors* include social support and social capital, neighbourhood quality and safety, use of recreational, cultural, and educational resources, and residential stability.

Generally, the children of Winnipeg (School Division No. 1) are fortunate, because a base of family and community support for the early years has already been established. There is, however, room for improvement, especially at the neighbourhood and community levels. With decisions based on research evidence, effective practices can be developed and the Winnipeg (School Division No. 1) community can continue to work toward achieving the goal of ensuring that every child enters school with the best possible chance of success.

Data for these reports were derived from several sources:

- The *National Longitudinal Survey of Children and Youth* (NLSCY) *Community Study* is a national instrument used to gather data directly from parents and children concerning the health and well-being of Canada's of children 5-6 years of age.
- The *Early Development Instrument* (EDI) is based on a teachers' checklist of their kindergarten students' readiness to learn.

- The NLSCY and EDI data collected from the UEY sites allows comparison across the first five UEY communities. Where possible, the outcomes of the children in this community were compared with averages for their province and for Canada as a whole. If data was not available at those levels, the outcomes of the children are compared across the five UEY communities of Southwest Newfoundland; Prince Edward Island; Winnipeg (School Division No. 1), Manitoba; Prince Albert, Saskatchewan; and Fraser North, British Columbia.

Winnipeg (School Division No. 1) is one of the first five sites for the UEY initiative. Valuable lessons will be learned about the needs and strengths of communities with different economic, social, and physical characteristics, and about how they are each working to improve their young children's outcomes. This community-based research is important because it allows a community to understand how well its youngest citizens are developing and lends insight into which factors contribute to success and which warrant further consideration.

Study Highlights

Approximately 42% of families in Winnipeg (School Division No. 1) were low income, 28.4% were Aboriginal, and 34.5% were headed by a single parent. Yet, one of the study's surprises is that the spatial distribution of children's outcomes does not match socio-economic status patterns. Many children in poor areas are faring quite well.

Using three tests, the National Longitudinal Survey of Children and Youth found that children in the study area scored below the national average on direct assessments of their vocabulary, behaviour, and cognitive development.

The Early Development Instrument found that the results for children in Winnipeg (School Division No. 1) on each of the five domains of school readiness were the same, slightly above or slightly below the average of all children evaluated in 1999-2000.

The relationship of family background, family processes, and community factors from the NLSCY in relation to the EDI domain scores were studied for all 5 UEY communities together.

- Family income, use of community resources, and engagement in learning activities were the most important variables related to the cognitive domain.
- Positive parenting was by far the most important factor explaining the outcomes in the behavioural domain, followed by not having a father or a mother working outside the home.
- Positive parenting, residential stability, and father's education were the most important variables influencing physical health and well-being

The role of positive parenting is particularly important. It explained 37% of the differences in physical health and well-being scores, and 131% of the differences in behaviour scores. This latter number was by far the highest in the study.

Based on NLSCY data, use of resources is low, 3.2 on a 10.0 point scale, for Winnipeg (School Division No. 1), and 3.2 based on the combined data for the first five UEY communities.

Use of resources was explored further by considering the availability of educational, cultural and recreational resources for the first five UEY communities. In Winnipeg (School Division No. 1), the availability of education resources was 20.6%, cultural resources was 64.6%, and recreational resources was 68.1% for Winnipeg (School Division No. 1) compared with 24.1%, 55.1%, and 70.0% respectively, for the combined NLSCY data of the first five UEY communities.

For Winnipeg (School Division No. 1), the total score out of 100 for family and community indicators was 63.4, 3.5 points below the average for the five UEY communities, which is 66.9. Overall, parents tend to have strong parenting skills, and families are functioning fairly well under difficult circumstances, despite living in relatively less safe neighbourhoods with low social cohesion and social support.

Despite good overall development, children in Winnipeg (School Division No. 1) would benefit from efforts to improve their early language and literacy scores, as well as their general cognitive development and behaviour.

Acknowledgements

This report was prepared by J. Douglas Willms, with the help of Rick Audas, Shawn Dalton, and George Frempong. The author is grateful to the staff of the Applied Research Branch for comments on drafts of this report; and to Sarah Connor, whose report on the UEY project in North York (the prototype community) provided a useful starting point. The author is pleased to acknowledge Jodi Lee, the community research co-ordinator for Winnipeg, who provided demographic highlights, maps of Winnipeg (School Division No.1), and information on local services and resources. Without Ms. Lee's assistance, the study would not have been possible.

The author would also like to thank Magdalena Janus for her feedback on the EDI analysis. Magdalena Janus, along with Dan Offord and the Canadian Centre for Studies of Children at Risk, developed the EDI described in the first chapter of this report.

I. Introduction

A. What this study is about

Understanding the Early Years (UEY) is an initiative that provides information to help strengthen the research capacity of communities to make informed decisions about the best policies and most appropriate programs to serve families with young children. It seeks to provide information about the influence of community factors on young children's development, and to enhance community capacity to use these data to monitor early childhood development and to create effective community-based supports. Data describing the outcomes of children ages 5 and 6, as well as the family and community environments in which they live, were collected from three sources: their parents, their teachers, and from the children themselves.

This research report is one of five community research reports describing children's outcomes and explaining them in terms of three factors: family background, family processes, and community factors. Children's outcomes were assessed in three major categories: physical health and well-being, cognitive skills, and behavioral measures.

The data for all five community research reports were based on the Early Development Instrument (EDI) and the National Longitudinal Survey of Children and Youth (NLSCY) assessments. This means that the samples drawn in each of the first five communities were based on families with children ages 5 and 6 who were given both of the EDI and NLSCY assessments.

In order to understand the performance of the children in this community based on the EDI, the results are compared to a larger EDI sample of about 28,250 children, drawn from selected communities. Although this sample – referred to as EDI – 16, is not truly national or representative, it provides a means of comparing children in this community with other 5-6 year old children. The numbers of EDI-16, are different from those used in the EDI monitoring report.[1]

The results from the NLSCY assessments taken by the community children are compared with the national means, developed from the national survey, which has a nationally representative sample. There is increasing evidence to support the importance of investing in the early years of children's development. New research shows that these formative years are critical, and that the kind of nurturing and stimulation that children receive in their early years can have a major impact on the rest of their lives.

Evidence also suggests that neighbourhoods and communities where children grow and learn directly influence their development. They affect parents' ability to provide the best possible family environment, and the ability of schools to offer the best possible education.

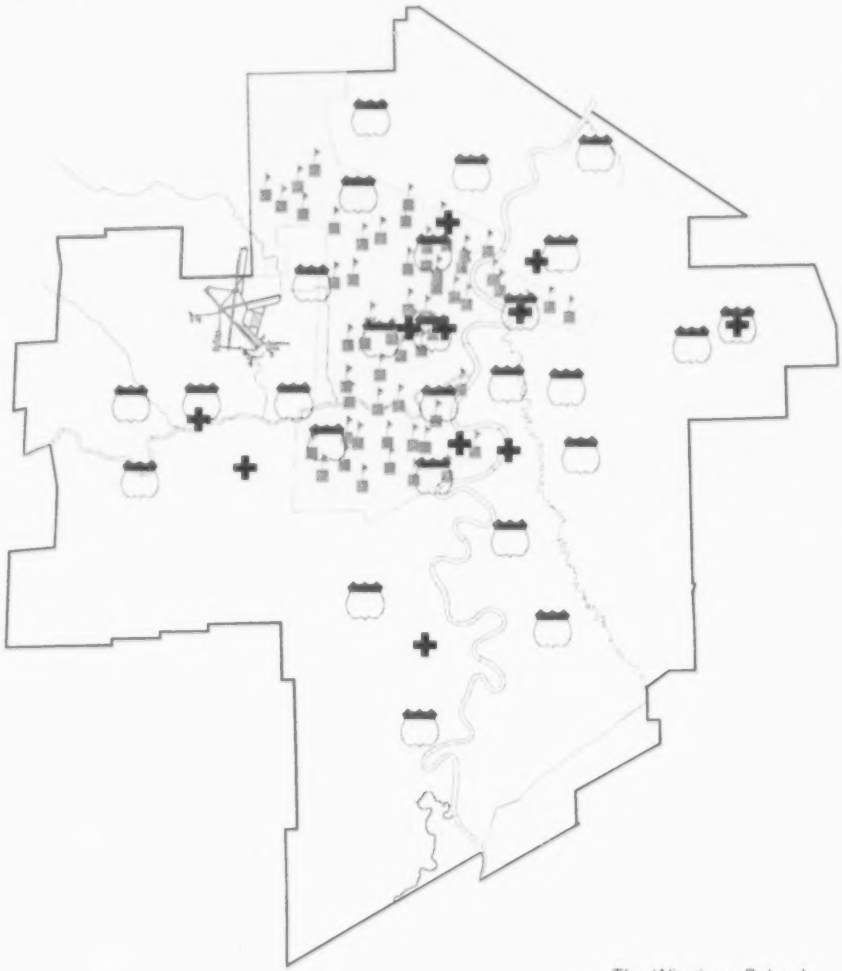
Neighbourhoods, communities, provinces and regions across Canada differ in important ways. Therefore, gathering community-specific information about children and the places where they are raised can help the policy sector[2] deliver programs that are sensitive and responsive to local conditions. *Understanding the Early Years* can contribute to this process.

[1] The EDI community monitoring report uses only EDI data. The NLSCY data is from a sample of all of the children who completed the EDI. So the numbers in the EDI report and the research report will not be the same.

[2] "Policy sector" is broadly conceived to include families, the private and voluntary sectors, and governments at local, provincial and federal levels.

Figure 1.1

Winnipeg (School Division No. 1)



*Source: 1996 Census

This research report provides baseline information about kindergarten children in Winnipeg (School Division No. 1). Figure 1.1 shows the geographic area where the children and families sampled in this study live.

While the focus of this report is on the community of Winnipeg (School Division No. 1) and the programs within it, it should be noted that many programs exist for children outside of the division boundaries, and many children and their families may be accessing services just beyond the division. It is not known if families are taking part in the programs just beyond the division boundaries. This should also be considered when interpreting maps: programs not represented on the maps may exist on the other side of the boundaries, making it appear as though the area may not be serviced as well as some other areas.

The first aim of this report is to assess how children fare in learning and behavioural outcomes and in physical health and well-being. It considers children's developmental outcomes shortly after they begin kindergarten. Where possible, the report provides provincial- and national-level information with which local conditions can be compared.

The report's second aim is to discern how important certain family and community factors are in affecting children's development, as well as to provide some indication of what actions might further improve children's outcomes in this community.

The report sets out ten indicators upon which this community can act over the next few years. If the policy sector can devise means to improve the processes associated with these indicators, it is likely that children's outcomes during the formative years will improve, as will their chances of leading healthy and fulfilling lives.

B. How the study was conducted

The information contained in this document was collected and analyzed using a variety of methods.

Two major types of information about the children were collected. The first considers their "readiness to learn," which comprises five major domains:

- Physical health and well-being
- Social competence
- Emotional maturity
- Language and cognitive development
- Communication skills and general knowledge.

Information for this set of domains was collected by teachers, using a checklist called the Early Development Instrument (EDI), developed by Dr. Dan Offord and Dr. Magdalena Janus at the Canadian Centre for Studies of Children at Risk, McMaster University. Teachers of all kindergarten children attending public schools in Winnipeg (School Division No. 1) were asked to complete the checklist about the behaviours and development of each child in their class. This information was used to determine how ready the community's children, as a whole, were for school.

The second type of developmental information was collected through a survey of parents, guardians, and the children themselves. The instruments used in the National Longitudinal Survey of Children and Youth Community Study were administered to children and their parents. This was done to acquire more detailed information about the experiences of children and families in Winnipeg (School Division No. 1) as well as, measures of

children's outcomes regarding their cognitive skills, pro-social behaviour and behaviour outcomes. In addition, information regarding childcare arrangements (e.g., whether children were cared for by parents, relatives, or non-relatives, either at home or outside the home) was collected.

A random sample of 595 kindergarten children from Winnipeg (School Division No. 1) was selected to participate in this survey. Statistics Canada interviewers collected detailed information from and about these children using instruments from the NLSCY Community Study. The major instruments measuring children's outcomes include:

- Vocabulary Skills (Peabody Picture Vocabulary Test, Revised)
- Developmental Level (Who Am I?)
- Number Knowledge (Number Knowledge Assessment)
- Behaviour Outcomes.

The interviewers also collected information about several family and community factors that can help explain the patterns of child development in the community.

Children completed assessments that asked them to draw, print symbols (e.g., letters and words), show their understanding of quantity and number sequence, and match pictures to words that they heard. Their families provided information about their social and economic backgrounds; their children's activities and involvement in the community; their health; and their social, emotional, and behavioural development.

Because the NLSCY questionnaire is also used across the country as a national survey, the outcomes for children in this community can be compared with national data.

C. Why the study is of interest

Understanding the Early Years combines information about children with information about their families and the communities in which they live. This in turn, provides an understanding of the relationship between children's outcomes and the environments in which they are raised. This is important for Canada's parents and communities who want to help their children develop well. Second, it helps the individuals, institutions, and communities who work with children to understand these processes at the levels where action is often most effective, the neighbourhood and community.

This report highlights some of the key findings from the information that was collected from teachers, parents, and their children. It examines the overall development of children in kindergarten (through the Early Development Instrument) and provides a more detailed look at the outcomes of these children (through the NLSCY Community Study). It suggests some of the unique strengths from which Winnipeg (School Division No. 1) can work, and some challenges to overcome in continuing to build a collective commitment to ensure the health, well-being, and positive development of its young children.

D. A profile of Winnipeg (School Division No. 1)

Winnipeg's School Division No.1 covers a large urban area of 77.46 sq. km (comprising 16.4% of the city area) with a perimeter of 59 km. In 1996, 220,602 people lived in the area, including 20,181 children 6 years of age and under. The community is made up of largely residential areas, with several large industrial zones primarily located in the northwest region.

Many neighbourhoods had an individual poverty rate of 38% or greater. More than 9000 of the Division's children aged 6 and younger reside in these high-poverty neighbourhoods. There were also pockets of high poverty near more affluent neighbourhoods, which may create a challenge for resource distribution and collaboration.

Here are some additional demographic highlights:

Education

- About 27% of the division residents had completed post-secondary education. These individuals lived predominantly in the southern part of the community.
- Eighty-five enumeration areas (EAs) had fewer than 15% of residents with a post-secondary education, comprising 6480 (32%) of children 0 to 6 years old. In Winnipeg (School Division No.1), approximately 27% of people 15 years and over had not yet obtained a high school diploma. This figure was less than the national average of 37%.
- However, 20% of Division residents lived in areas where the number of individuals without a high school diploma was higher than the national average. Approximately 4695 (23%) of all children 0 to 6 years old lived in these EAs.

Employment

- The unemployment rate, as of 1996, was 13%. This rate was slightly higher than Canada's overall average, which was 10%.
- There were 49 EAs with high unemployment rates (greater than 23%, which is one standard deviation above the national average), located near the centre of the community and close to downtown. These areas were also marked by other forms of potential risk, such as an above-average proportion of persons without a high school diploma and a high poverty rate.

Poverty

- The poverty rate (measured as the proportion of individuals living below Statistics Canada's Low-income Cut-off) was 42%, compared with the national rate of 19%. Some EAs had poverty rates as high as 94%.
- One hundred and twenty four EAs had 37% (one standard deviation above the national average) or more of their residents living in poverty. These EAs were mostly in central and northern areas.
- Nearly 40% of the Division's population, and 45% of children aged 6 and younger, lived in these high-poverty areas. These areas also tended to have higher unemployment rates and residents with lower levels of education.

Mobility

- The percentage of Division residents who had moved in the previous year was 21% of the population, higher than the national average of 16%.
- There were 89 EAs in the Division characterized by high mobility (30% of the population or more had moved within the past year), and these EAs had a poverty rate of approximately 38%. In total, there were 4040 children (20%) aged 6 or younger living in these EAs who were possibly affected by the multiple factors of instability, poverty, and disadvantage. In turn, these neighbourhoods may benefit from community resources which target the various risk factors.

Family Type

- In Winnipeg (School Division No.1), the proportion of families with children headed by a lone parent was 34.5%, higher than the national average of 15.6%

- One hundred and thirty-one EAs had a proportion of lone-parent families greater than 23%. Over 9000 of the children aged 6 and younger lived in these areas (concentrated in the centre and in northern areas of the Division).

- Thirty EAs had no lone parents.

Aboriginal Population

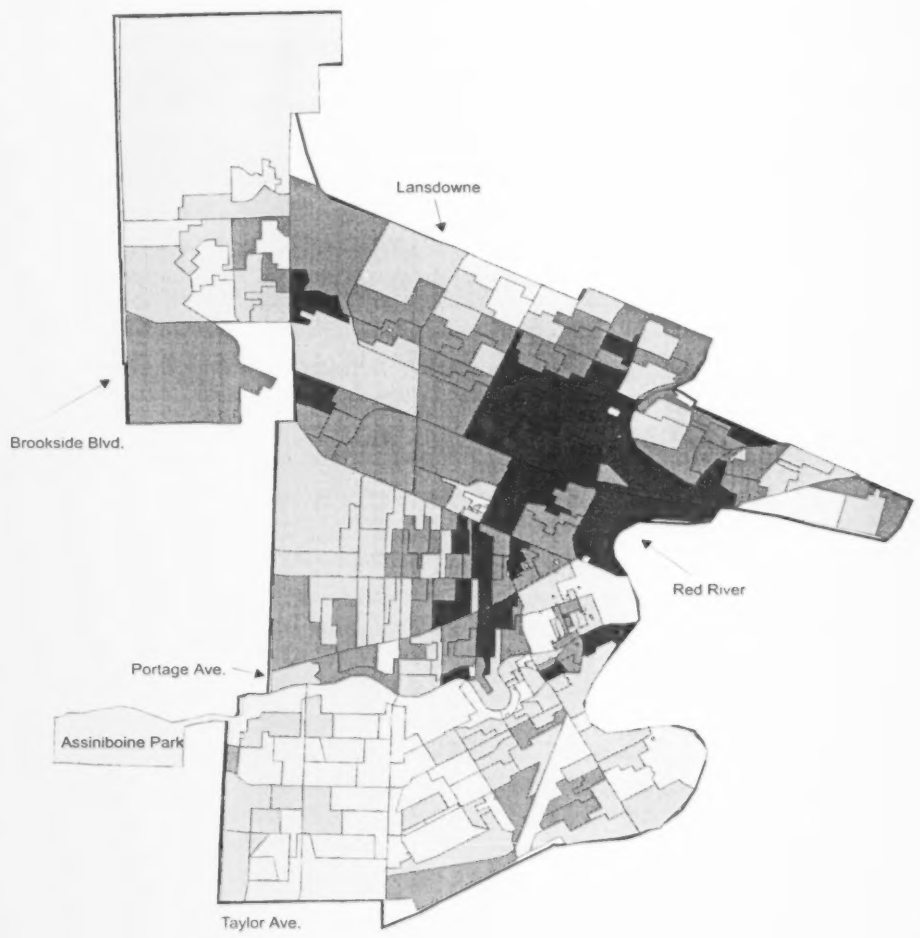
Of particular note, Winnipeg is home to 3% of the nation's Aboriginal population; and, has more Aboriginal residents than the Northwest Territories.

While 4% of Canadian families are Aboriginal, the figure rises to 11% for Manitoba and to 28.4% for Winnipeg (School Division No. 1). The community is home to 60% of Winnipeg's Aboriginal people.

A high proportion of Aboriginal people tend to be clustered around central areas. Approximately 228 EAs were higher than the national average (15,740 children aged 0 to 6 years old lived here) and 117 were above the city average (8720 children aged 0 to 6 years old lived here). Aboriginal people comprised 100% of one EA.

Figure 1.2

Aboriginal Population in Winnipeg (School Division No. 1)



*Source: 1996 Census

Inset 1 - Socio-economic Status

The measure of socio-economic status (SES) for the map in Figure 1.3 was derived from the 1996 Canadian Census, based on data describing enumeration areas (EAs), which represents a geographic unit of about 400 families. The measure of SES is a composite score derived from census measures of family income, level of education, and the occupational status of adults living within each enumeration area. The composite scores were standardized, such that the average score for all EAs in Canada was zero, and the standard deviation was one. With this standardization, only about one in six EAs scored below -1, (low SES shown in dark red), and about one in six scored above +1, (high SES shown in dark green).

E. Socio-economic status in study area

Socio-economic status (SES) is an important variable in social research because it affects a person's "chances for education, income, occupation, marriage, health, friends, and even life expectancy."[3] This report describes children's outcomes and how they are affected by family socio-economic status, family processes, and community resources. Thus, it is helpful to have an understanding of the socio-economic backgrounds of the families in this community, as well as of how these are distributed geographically across the study area.

Socio-economic status is usually quantified as a composite measure comprising income, level of education, and occupational status. Accordingly, the measure of SES used here combines the income, level of education, and occupational status of the children's parents. Other family factors, such as family structure (e.g., single- or two-parent family), or whether the mother was a teenager when the child was born, are not dimensions of SES (although they are usually correlated with SES). Additional aspects of family and community structure will be presented in Section III.

It is evident from Figure 1.1 that the community is located within a densely populated urban area. Figure 1.3 shows the distribution of socio-economic status in this community. This map clearly shows spatially distinct concentrations of high SES (southern areas) and low SES (central sections), with intermediate zones between the two. Many of the enumeration areas (EAs) have scores below –1; these areas are contiguous, creating a large area of concentrated low SES (orange and dark red).

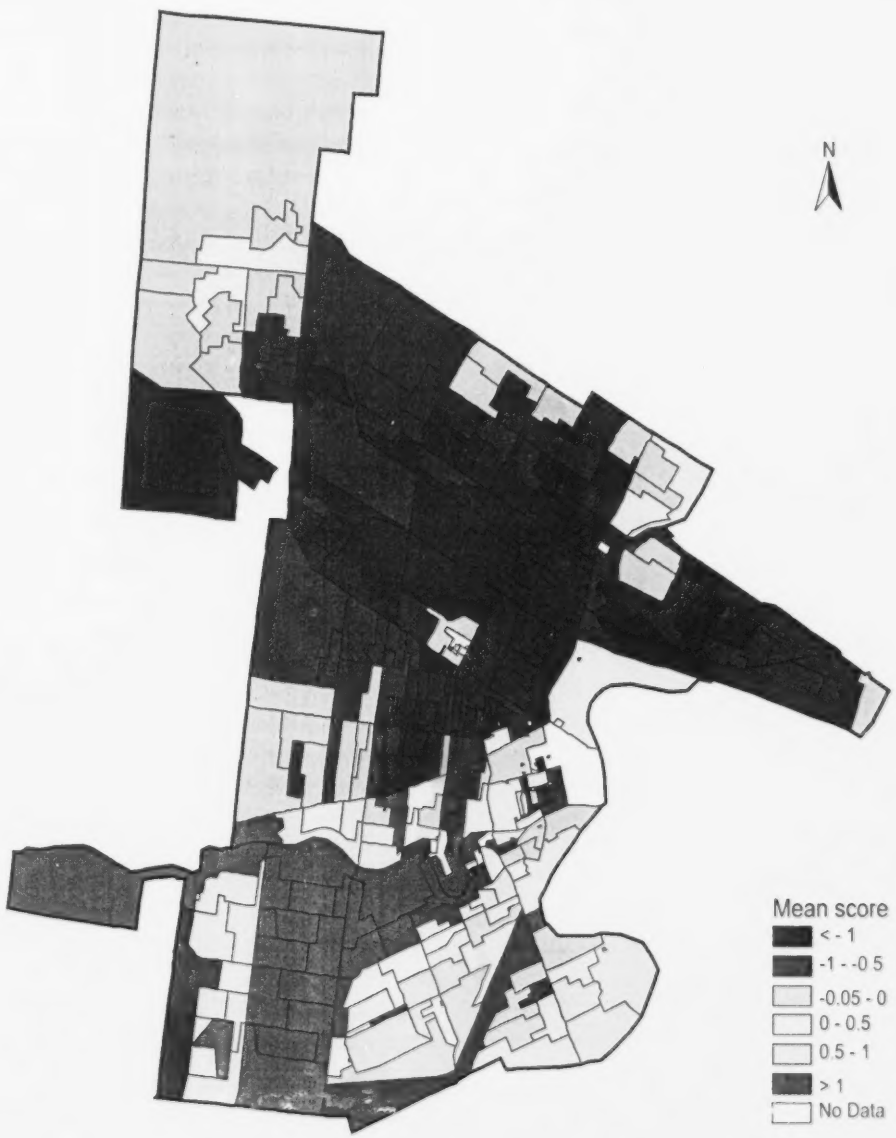
Likewise, there are many EAs with scores above 1, and these are also adjacent to or near one another. The disparities in socio-economic status will also be apparent in the results presented in Section III, which describe the family background characteristics of the children and families in this study.

Despite the relatively low socio-economic status of some sections of this community, the children of this community scored near the national averages for most outcomes measured with the EDI and the NLSCY instruments. Moreover, the spatial distribution of outcomes does not match SES patterns (see Figures 2.3 to 2.7), indicating that there are many children in poor areas who are faring quite well.

[3] Miller, Delbert C. 1991. *Handbook of Research Design and Social Measurement*. Sage Publications, Inc. Newbury Park, CA. p. 327.

Figure 1.3

Socio-economic Status of Winnipeg (School Division No. 1)



II. The Outcomes For Children of Winnipeg (School Division No. 1)

A. How the outcomes were measured

This section provides more information about the specific measures of children's outcomes. A child's cognitive skills, behaviour, and physical health and well-being outcomes were measured in two ways, using the Early Development Instrument (EDI) and the National Longitudinal Study of Children and Youth (NLSCY) Community Study.

Five Domains for EDI (teacher report)

Physical health and well-being: children's motor skills, energy levels, fatigue, and clumsiness.

Social competence: self-confidence, tolerance, and children's ability to get along with other children, to accept responsibility for their own actions, to work independently.

Emotional health and maturity: children's general emotional health and maturity. It also identifies minor problems with aggression, restlessness, distractibility, or in-attentiveness, as well as excessive, regular sadness.

Language and cognitive development: mastery of the basics of reading and writing, interest in books, and numerical skills (e.g., recognising numbers and counting).

Communication skills and general knowledge: children's general knowledge, their ability to articulate clearly, and their ability to understand and communicate in English.

Inset 2

The Early Development Instrument contained more than 70 questions, and asked teachers the following types of questions about each child in the class.

- **Would you say that this child follows instructions, accepts responsibility, and works independently?**
- **How often is the child too tired to do school work?**
- **Is the child well co-ordinated?**
- **Would you say that this child is upset when left by a caregiver, has temper tantrums, appears worried, or cries a lot?**

Teachers were asked to comment on the child's use of language, his or her interest in books, and his or her abilities related to reading and writing. They were also asked about children's communication skills and general knowledge.

Cognitive Skills (from the NLSCY – direct assessments of the child)

Vocabulary Skills (Peabody Picture Vocabulary Test, Revised – PPVT-R) assesses a child's receptive or hearing vocabulary. The children hear a word said aloud and are asked to point to one of four pictures that they believe corresponds to the word.

Developmental Level (Who Am I?): is based on copying and writing tasks, which are designed to test their ability to conceptualise and to reconstruct a geometrical shape and to use symbolic representations, as illustrated by their understanding and use of conventional symbols such as numbers, letters, and words. Children are asked to copy five shapes (such as a circle or a diamond) and to write their names, numbers, letters, words, and a sentence. Because the tasks are not dependent on language, *Who Am I?* can be

used to assess children whose knowledge of English or French is limited.

Number Knowledge Assessment: is designed to test the child's understanding of numbers. Children who do not have this understanding, or who are working in a language different from their mother tongue, often have difficulty mastering basic arithmetic and demonstrating number sense. The *Number Knowledge Assessment* evaluates children's understanding of quantity (more vs. less), their ability to count objects, their understanding of number sequence, and their ability to do simple arithmetic.

Behaviour Outcomes (from NLSCY Community Study – parent report)

Identifying a child's behaviour is based on assessments by the person most knowledgeable about the child, usually the mother.[4] The measurements comprise several questions, each with the same format. The mother is asked how often her child cannot sit still, is restless, or is hyperactive. She answers with one of three possible responses – "never or not true"; "sometimes or somewhat true"; and "often or very true." The assessment included the following elements.

Positive social behaviour: children who exhibit higher levels of positive social behaviour are more likely to try to help and comfort others. They may offer to help pick up objects that another child has dropped or offer to help a child who is having trouble with a difficult task. They might also invite their peers to join in a game.

Indirect aggression: this element identifies children who, when mad at someone, try to get others to dislike that person; who become friends with another for revenge; who say bad things behind the other's back; who say to others, "Let's not be with him/her"; or who tell secrets to a third person.

Hyperactivity: hyperactive children cannot sit still; are restless and are easily distracted; have trouble sticking to any activity; fidget; cannot concentrate, cannot pay attention for long; are impulsive; have difficulty waiting their turn in games or groups; or cannot settle to do anything for more than a few moments.

Emotional disorder/anxiety: this element identifies children who seem to be unhappy, sad, or depressed; are too fearful or anxious; are worried; cry a lot; tend to be rather solitary; appear miserable, unhappy, tearful, or distressed; are not as happy as other children; are nervous, high strung, or tense; or have trouble enjoying themselves.

Physical aggression and conduct disorder: these children get into many fights. When another child accidentally hurts them (by bumping into them, for example), they assume that the other child meant to do it, and then react with anger and fighting. Also included are children who kick, bite, or hit other children; who physically attack people; and who threaten people, are cruel, or bully others.

B. What we learned from teachers: Results of the Early Development Instrument

The children of Winnipeg (School Division No. 1) scored well overall on the five domains, compared with children in the EDI–16 sample (see Table 2.1)[5], with the largest difference

[4] Statistics Canada trained personnel conducted the parent interviews by telephone only in English or French for the NLSCY. Parents without telephones or speaking other languages were not interviewed.

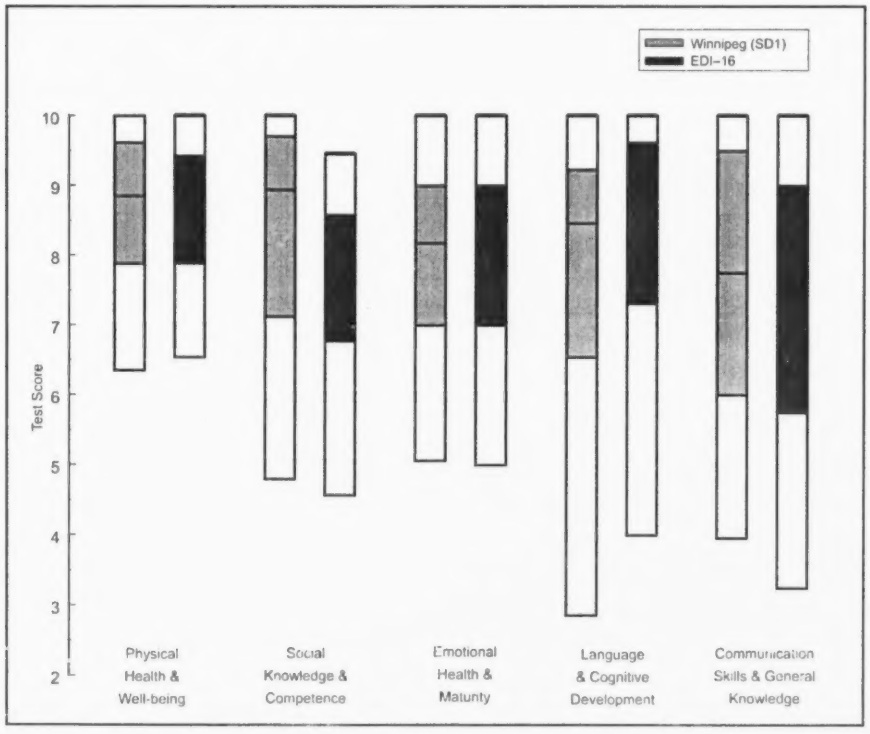
[5] The EDI sample size, N=511, included valid data only To be included in the EDI sample size for Winnipeg (School Division No. 1) children needed scores on at least 3 out of the 5 EDI domains. This explains why the EDI sample size (N-511) is different from the NLSCY sample size (N=595) for Winnipeg (School Division No. 1)

Table 2.1 – Mean Scores on the Early Development Instrument for the Winnipeg (School Division No. 1) Pilot Community and the Comparison Sample

	Winnipeg UEY Community (N=511)		EDI–16 (N=28,250)	
	Mean	SD	Mean	SD
Physical Health and Well-being	8.5	1.2	8.6	1.1
Social Knowledge and Competence	**8.3**	1.8	7.5	1.5
Emotional Health and Maturity	7.9	1.5	7.9	1.5
Language and Cognitive Development	**7.7**	2.2	8.1	1.9
Communication Skills and General Knowledge	**7.5**	2.1	7.2	2.1

Note. Figures in bold text differ significantly ($p < .10$) from the Canadian mean

Figure 2.1 – Box plots comparing the distribution of EDI scores for Winnipeg (School Division No. 1)



being for Social Knowledge and Competence at 0.8 points above the EDI–16. Physical Health and Well-being scored 0.1 points below the EDI–16 and language and cognitive development scored 0.4 points below the EDI–16.

Figure 2.1 shows that the median scores for the EDI domains are comparable to those of the EDI–16 sample. The exception is Social Knowledge and Competence, which indicates that the children in this community had higher scores than those in the EDI–16 sample. The range of scores are indicated by the length of the boxes[6]. The inter-quartile range of children in Winnipeg is similar to that of the EDI–16 sample. The exception is language and cognitive development, where there are more children in Winnipeg with very low scores compared to the EDI–16.

Inset 3

The percentile plots display the distribution of the EDI scores for each group as follows:

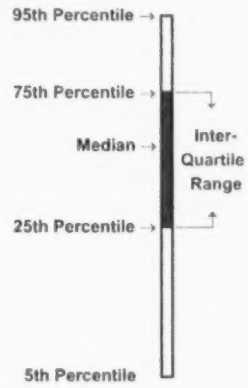
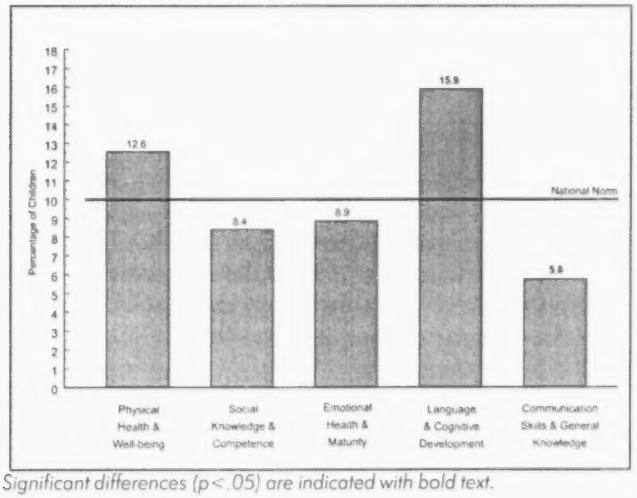


Figure 2.2 – Percentage of children with low scores on the Early Development Instrument (Winnipeg School Division No.1)



Significant differences ($p < .05$) are indicated with bold text.

6 The longer the boxes, the greater range of variability in the EDI domain scores. For example, the physical health and well-being domain has short boxes which indicates that scores were very similar to one another. In contrast, the language and cognitive development domain has long boxes which indicates that scores varied considerably, ranging from very low to very high scores.

Inset 3 shows the median and percentiles for the distribution of EDI scores for each group. The median represents the part at which 50% of the cases fall below and 50% of the cases fall above the median. Percentiles refer to the percentages of cases with values falling above and below them.

The EDI–16 was also used to establish a "low-score" threshold for each EDI domain. The low-score threshold scores were set to the tenth percentile, which means that 10% of all children scored below this score for each domain. Thus, if a community had typical results, we would expect 10% of its children to score below the same threshold scores for each domain. Typically, communities have the highest scores in the Physical Health and Well-being domain. This finding may not be surprising, given universal access to health care for Canadians. In Winnipeg (School Division No. 1), however, slightly more than the expected 10% fall under the threshold for Physical Health and Well-being. In Winnipeg, the percentage of children with scores below the 10% threshold ranged 5.8% to 15.9% across the five domains. The area of greatest concern is language and cognitive development (15.9%).

The data collected as part of the *Understanding the Early Years* study included information about where each child resided. Therefore, an analysis was conducted that would give some indication of how children's scores on the EDI were distributed geographically. To achieve this, we determined the average score within each enumeration area, for each domain of the EDI. We then "smoothed" the average scores for each enumeration area.

Figures 2.3 through 2.7 display the geographic distribution of the EDI scores for each of the domains. The distributions vary by domain, but the pattern of scores across EAs

Inset 4 – Smoothing Data

This is a statistical technique that involves estimating the mean score for a particular EA together with the scores for all of the EAs that immediately surround it (the technical term is "geographically contiguous"). Smoothing the spatial data in this way provides a more accurate display of what we would expect if all kindergarten children in the community had participated in the EDI. It also ensures that the confidentiality of individuals, or small groups of individuals, is not compromised.

to recognise that while some areas have generally high scores, there will always be some children needing extra support in any given neighbourhood.

The map in Figure 2.3 shows that while many EAs scored below 8.5 on physical health and well-being, the EAs with high socio-economic status also tended to have relatively low scores. The central[7] area of this community has the greatest concentration of children with low scores.

Figure 2.4 shows that scores in Social Knowledge and Competence tend to be quite high and are fairly evenly distributed across Winnipeg (School Division No. 1).

Figure 2.5 shows that scores for emotional health and maturity tend to be fairly high and evenly distributed. However, there is a slightly higher proportion of medium to low scores in the central EAs.

[7] Central does not refer to the area of Winnipeg (School Division No. 1) known to Winnipeg residents as the central area.

Figure 2.3

The Geographic Distribution of EDI Scores for Physical Health and Well-being

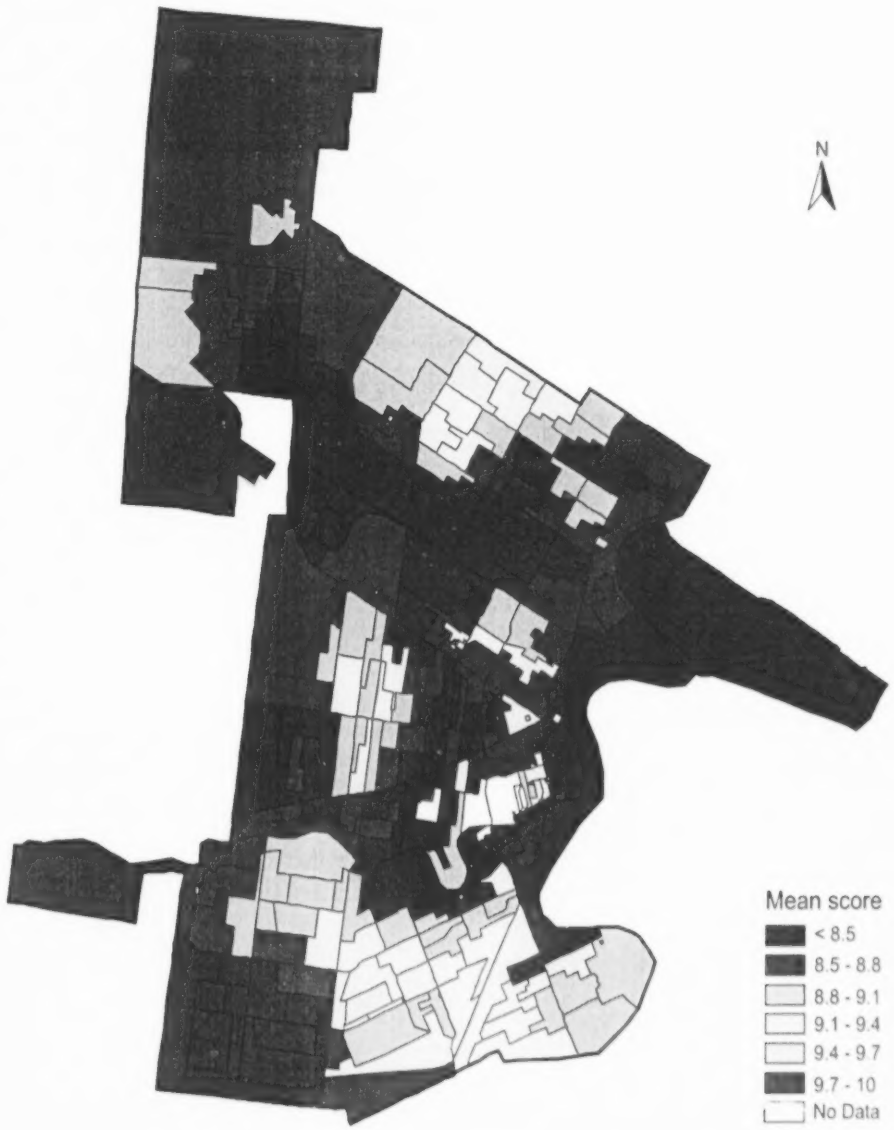


Figure 2.4

The Geographic Distribution of EDI Scores for Social Knowledge and Competence

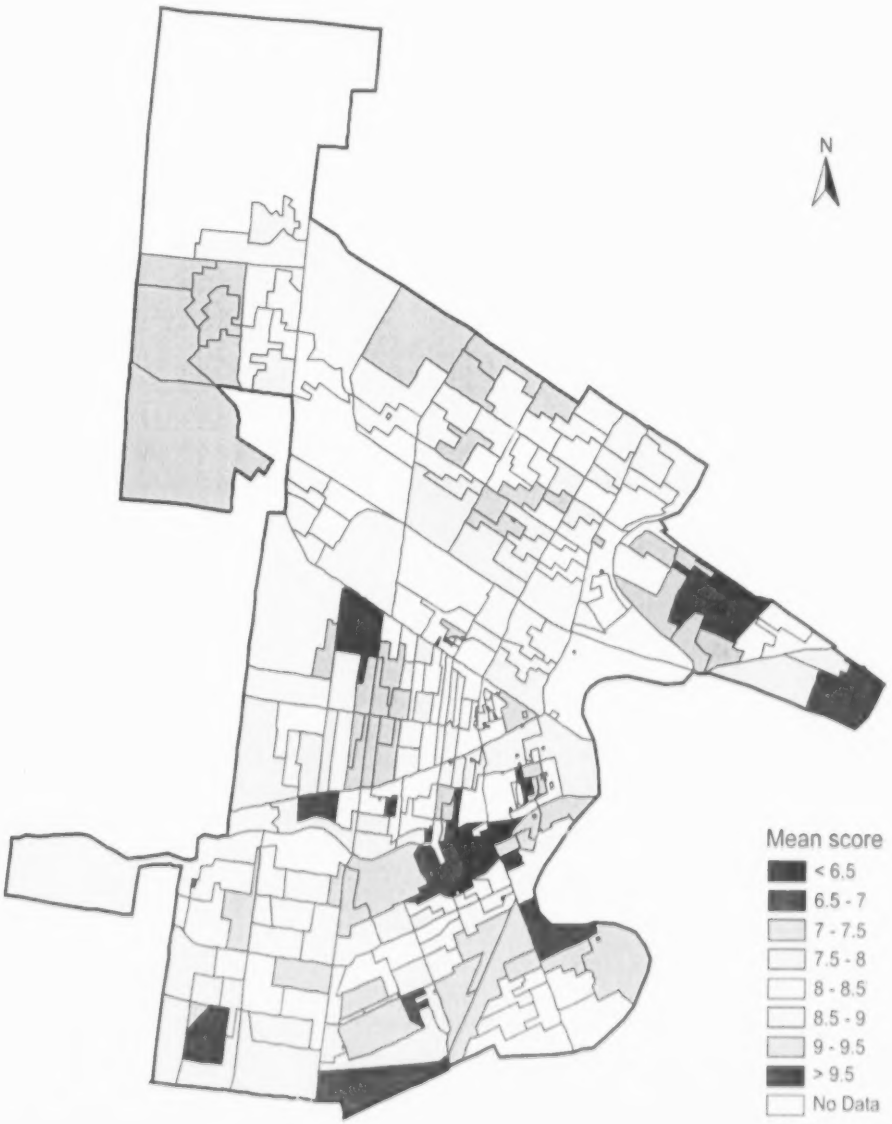


Figure 2.5

The Geographic Distribution of EDI Scores for Emotional Health and Maturity

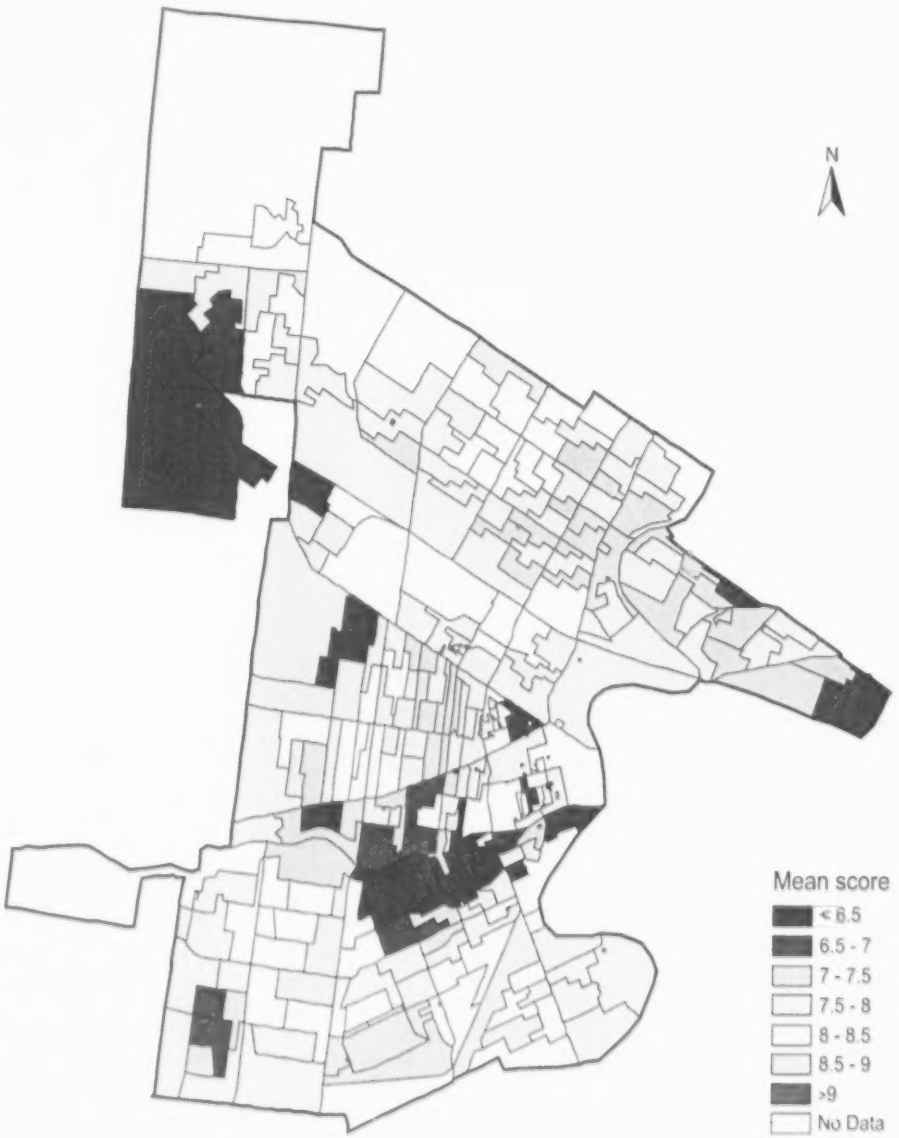


Figure 2.6

The Geographic Distribution of EDI Scores for Language and Cognitive Development

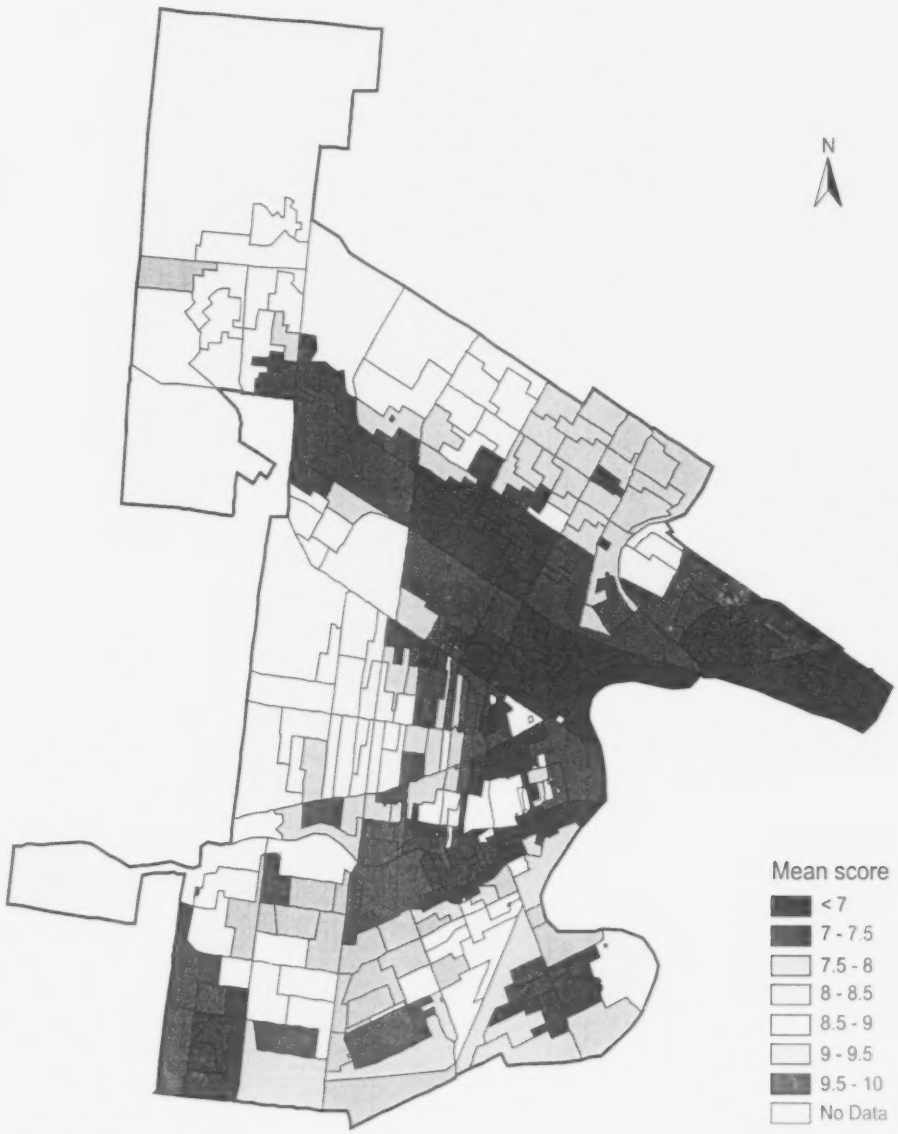


Figure 2.7

The Geographic Distribution of EDI Scores for Communication Skills and General Knowledge

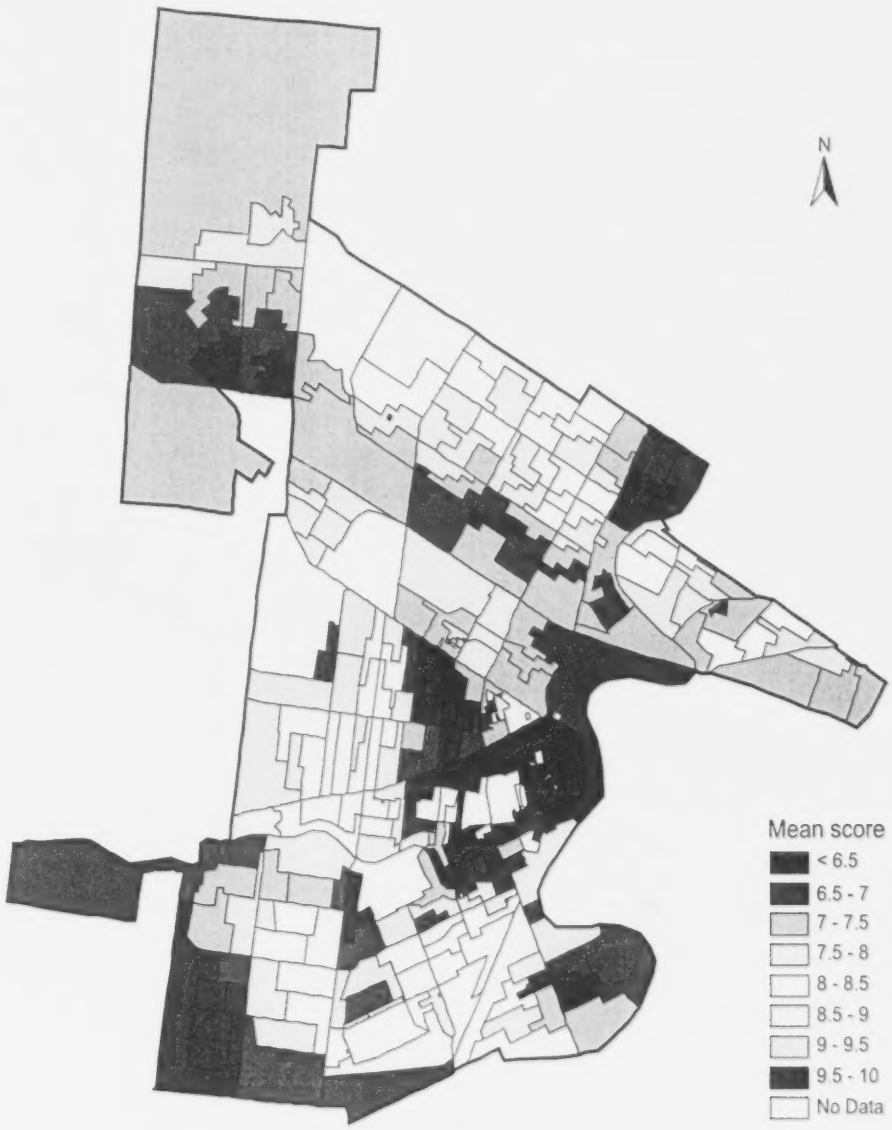


Figure 2.6 indicates that children in the central areas of the Winnipeg (School Division No.1) community exhibit lower scores on Language and Cognitive Development. However, there are also several pockets of low scores (dark red) elsewhere in the community.

Figure 2.7 shows that most EAs had scores between 7 and 8.5 for Communication Skills and General Knowledge, and that these are distributed throughout the community. Pockets in the central-west and southern-east attained higher scores (8.5 and above) for this domain.

Overall, the maps show no consistent pattern for the EAs regarding SES and the 5 EDI domains in Winnipeg (School Division No. 1).

These maps indicate that socio-economic background is not a definitive predictor of EDI outcomes, and that other factors that influence children's development should be considered. It is likely that these outcomes can be more fully explained if additional family and community factors are taken into consideration.

C. What we learned from parents, guardians, and the children: NLSCY Community Study results

In this section, we discuss the results of the National Longitudinal Survey of Children and Youth Community Study, which measures children's cognitive skills, positive social behaviour, and behaviour problems.

Table 2.2 displays the means and standard deviations of scores on the *Developmental Assessment (Who Am I?)*, on the *Positive Behaviour Scale*, and on the *Receptive Language (PPVT-R) Test* for Winnipeg (School Division No.1). Figure 2.8 displays their distributions.

Inset 5 - For the Receptive Language Test, national norms were available, and the scores are scaled such that the national mean is 100, and the standard deviation (a measure of the spread of scores) is 15. National norms were not available for the *Developmental Assessment (Who Am I?)*, or the *Positive Behaviour Scale*, but to maintain some degree of comparability, we scaled them to have a mean of 100 and a standard deviation of 15 for the entire sample of children who participated in the first five studies of the UEY project (see Table 2-2).

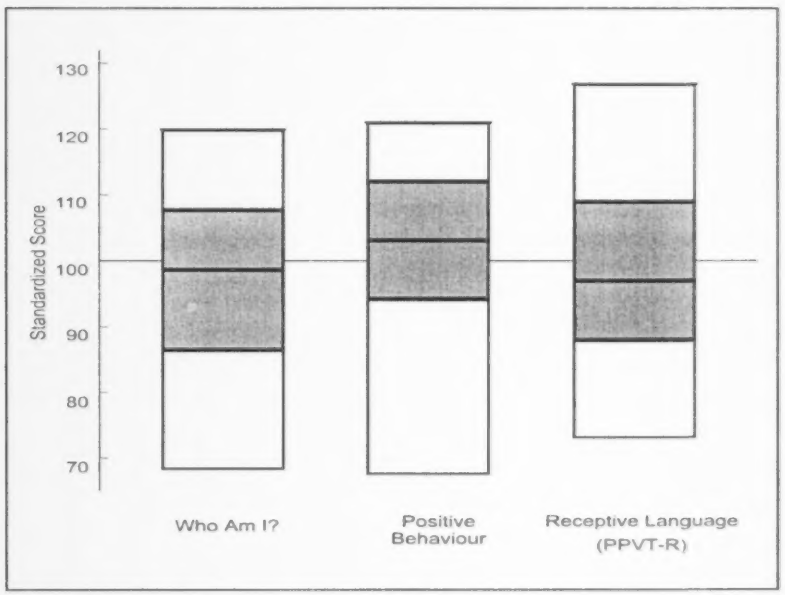
Table 2.2 – Mean Scores on the Standardized Instruments from the NLSCY for Winnipeg (School Division No. 1) UEY Community

	Mean	Standard Deviation
Developmental Assessment (Who Am I?) (N=581)	**96.9**	15.4
Positive Behaviour Scale (N=578)	**98.8**	16.9
Receptive Language (PPVT-R) (N=570)	**98.5**	16.6

NLSCY (cycle 3)

Note: Figures in bold are significantly different from the national mean of 100.

Figure 2.8 – Box plots comparing the distribution of scores on the Who Am I? Positive Behaviour Scale, and the PPVT-R.



NLSCY (cycle 3)
Note: See Inset 3

The scores on all three measures for the Winnipeg (School Division No.1) are below 100, indicating that the children are achieving scores below the national mean (see Inset 5). The spread of scores is relatively large, compared with the national distribution. This means that the children in Winnipeg (School Division No.1) vary more from one another when compared to the national norm.

Figure 2.9 shows the distribution of children with low scores on the *Developmental Assessment (Who Am I?)*, the *Positive Behaviour Scale*, and the *Receptive Language Test*. It also shows the percentage of children deemed to have a behaviour problem, based on four measures of behaviour (hyperactivity, emotional disturbance/anxiety, aggression/ conduct disorder, and indirect aggression).

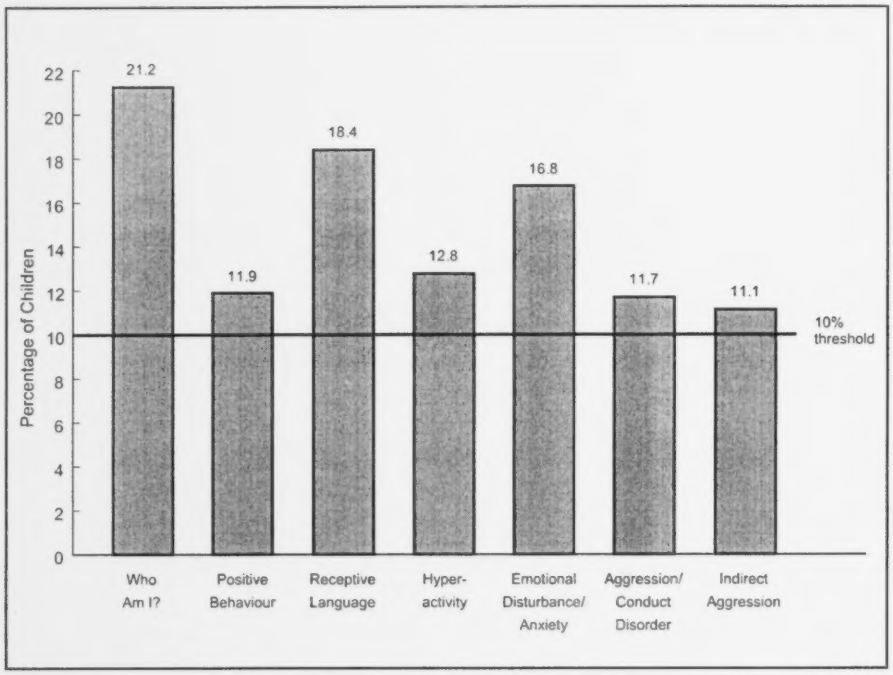
For each measure, the score at the 10th percentile of the national NLSCY was used as the threshold to define a low score.

The percent of children in the community scoring below the threshold provides a means of comparing against the 10 % scoring below the threshold nationally.

In Winnipeg (School Division No. 1), more than 10% of the children received scores below the 10% threshold on all three scales. The percentages of children with low cognitive scores, based on the *Developmental Assessment (Who Am I?)* and the *Receptive Language Test* were 21.2% and 18.4% respectively, which is well above the expected 10%.

On all four behavioural measures, more than 10% of the children in Winnipeg scored below the threshold. The proportion of children with low scores on emotional disturbance/anxiety (16.8%) may warrant attention. However, the percentage of children with low scores for the other measures was only slightly above 10%.

Figure 2.9 – Percentage of Children with Low Scores on the Cognitive and Behavioural Measures (Winnipeg School Division No. 1)



NLSCY (cycle 3) data

The study also included a direct measure of a child's understanding of the system of whole numbers. Scores were classified according to developmental levels:

- Have not reached level 1
- Reached level 1 (usually attained by 4-year-olds)
- Reached level 2 (usually attained by 6-year-olds)
- Reached level 3 (usually attained by 8-year-olds)

For all of the children who did the assessment across the first five UEY sites, only 1.2% had failed to reach level 1. The majority of children (29.4%) were at level 1, or had made the transition to level 2 (67.2%). Only 2.2% of the UEY children had reached level 3. These results are as expected given that the UEY children were 5 and 6 years old.

In Winnipeg (School Division No. 1), 60.7% of the children sampled had made the transition to at least level 2, lower than the UEY average of 69.4%.

These findings indicate that while the children of this community scored as well as the children in the national sample, their scores on direct measures of children's outcomes are somewhat less encouraging. The scores on the *Receptive Language Test* are of particular concern, because they are based on a test administered to children using a standard method and can be compared with scores of other children in the country. Though the median score of children in Winnipeg (School Division No.1) on this test was about 3 points below the national median, there was a much greater range of scores above the median than in the national sample.

III. How Family Background Affects Children's Readiness for School

In this section, information about the relationship between family background and children's outcomes is presented, and the family background of the children in Winnipeg (School Division No. 1) is described. The relationship between family background and children's outcomes is not straightforward. An important goal of *Understanding the Early Years* is to distinguish the effects of *family background,* and those associated with *family processes* and *community factors* on children's outcomes.

All three sets of contributing factors were measured. First, information on eight characteristics of family background are presented. In an earlier study of children's development, based on the national sample of children who participated in the first cycle of the NLSCY, these family background characteristics were significantly related to a range of children's developmental outcomes. The values, calculated for the eight family characteristics, are:

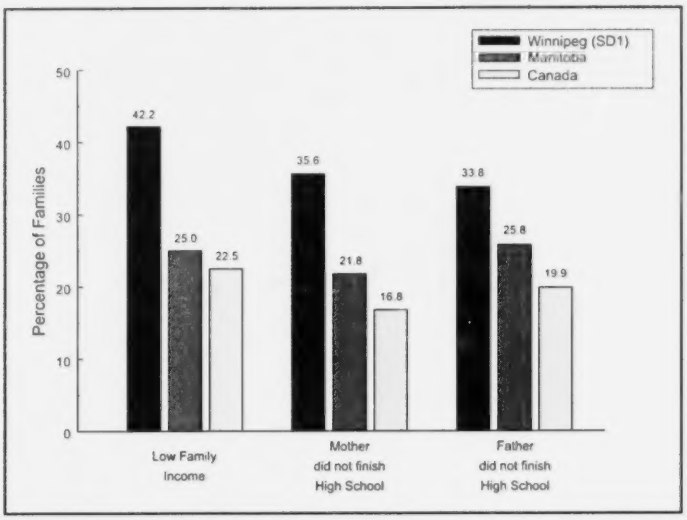
- Family income (in $10,000 units): considered to be low if less than $25,000.
- Mother's level of education: considered to be low if the mother did not complete high school.
- Father's level of education: considered to be low if the father did not complete high school.
- Mother's employment status: considered *not* working outside the home if the mother worked fewer than 25 weeks during the past year.
- Father's employment status: considered *not* working outside the home if the father worked fewer than 25 weeks during the past year.
- Single-parent family: only one parent or guardian living at home.
- Number of brothers and sisters: a simple count of the number of siblings living at home.

Figures 3.1 and 3.2 show the relative levels of income, education, employment, and single-parenthood for families at the community, as well as provincial, and national levels. About 42% of families in Winnipeg (School Division No.1) were considered low income, compared with about 21.5% in Manitoba and 22% in Canada.

More children's fathers had completed high school (66.2%) than mothers (64.4%) in Winnipeg (School Division No.1). However, compared with both provincial and national averages, parents in Winnipeg (School Division No. 1) had relatively low levels of education. Also, fewer mothers (59.2%) than fathers (84.8%) worked outside the home.

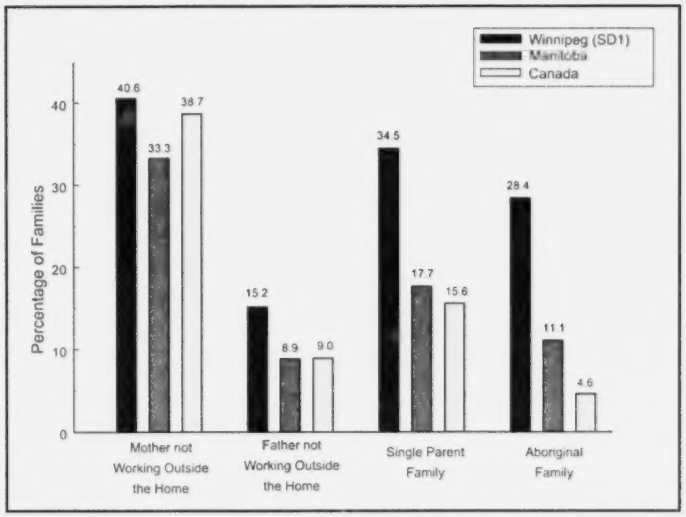
Unemployment levels are higher for fathers than mothers, and the discrepancies between fathers' unemployment at the national and provincial levels are higher than for mothers. More families (28.4%) are of Aboriginal origin, compared with 11.1% in Manitoba and 4.6% nationally. Almost 35% of families were headed by a single parent.

Figure 3.1 – Family Income and Parents' Education



NLSCY for Winnipeg (SD1) and national NLSCY (cycle 3).

Figure 3.2 – Parents' Employment and Marital Status



NLSCY for Winnipeg (SD1) and national NLSCY (cycle 3).

It is likely that the number of children living in low-income, single-parent households is fairly high. Yet, the spatial distributions of low and high EDI outcomes in EAs in this community do not coincide closely with the low and high SES levels, as shown in Figure 1.3. Therefore, socio-economic and demographic factors alone do not explain why some children are better prepared in their cognitive and behavioural skills when they enter school.

A. The Effects of Family Background Factors on Readiness

The analysis focussed on the factors contributing to whether or not a child had significantly low scores in one of the three developmental domains, these being the cognitive domain, the behavioural domain, and physical health and well-being.

A child was considered ready to learn in the cognitive domain if he or she did not have a low score (i.e., below the 10% threshold) on the *Receptive Language Test*, the *Developmental Assessment (Who Am I ?)*, or on the two cognitive domains of the Early Development Instrument.

Similarly, a child was considered ready to learn in the behavioural domain if he or she did not have a low score on the behaviour scale or on either of the two domains of the EDI pertaining to behaviour, and did not have any one of the four behaviour problems.

A child was considered ready to learn in the physical health domain if he or she scored above the low-score threshold on the Physical Health and Well-being domain of the EDI.

For each of the family background factors, the odds-ratio associated with whether a child was ready in these three domains were estimated (see Table 3.1) using the sample of children from all of the first five UEY communities. In other words, the results indicated in Table 3.1 are not specific to Winnipeg (School Division No. 1).

Table 3.1 – Relationship Between a Child's Readiness to Learn and Family Background

	Children's Outcomes		
	Cognitive	Behavioural	Physical Health and Well-being
Family Income ($10,000 units)	**1.16**	**1.11**	1.02
Mother's Education (years)	**1.10**	1.02	**1.10**
Father's Education (years)	1.04	0.99	1.10
Mother Not Working Outside Home	0.98	1.15	1.11
Father Not Working Outside Home	1.22	**1.48**	1.17
Single-Parent Family	0.98	0.96	0.70
Number of Brothers and Sisters	**0.90**	**0.91**	**0.81**

NLSCY in relation to 3 EDI domains for the first 5 UEY communities.

Note: Figures in bold text are statistically significant at $p<.10$.

Inset 6 - Odds-ratios

Odds-ratios denote the ratio of the odds of an event occurring after a one-unit change in the independent variable, compared with what it had been previously, if all other independent variables in the model are held constant.

For example, suppose the outcome variable of interest was whether a child repeated Grade 1. If the odds ratio for mother's education were .95, it would indicate that the odds of a child repeating a grade, if his or her mother had 13 years of education, is only 95% as large as the odds for a child whose mother had completed 12 years of education (or 12 years compared with 11 years, etc.).

Thus, in this example, increasing levels of maternal education reduce the odds of a child repeating Grade 1. When an odds-ratio is greater than 1.0, it indicates that the odds of experiencing the outcome (e.g., repeating Grade 1) are greater with increasing levels of the factor being considered.

The results indicate that family income and the educational level of the mother are strong determinants of cognitive development.

For example, the odds of being ready to learn for a child living in a family with an income of $40,000 is about 16% greater than a child who had similar background characteristics but had a family income of $30,000.

Similarly, each additional year of education of a child's mother increases the odds of being ready to learn by about 10%. In contrast, children with more siblings were more likely to have a low score on at least one of the cognitive measures. Each additional brother or sister decreases the odds of being ready to learn by about 10%.

The results for the behavioural domain are similar. Family income and small family size are protective factors; that is, they increase the likelihood that a child will not have a behaviour problem upon entry to school. However, the mother's level of education was not statistically significant. The results also indicate that children whose fathers are unemployed were more likely to be ready for school. This finding is somewhat surprising; however, it may be that fathers who are unemployed are more likely to spend time engaged with their children in activities that have a positive effect on their behaviour.

With respect to physical health and well-being, two factors emerged as statistically significant: mother's education and number of siblings. Children were less likely to have experienced problems in this domain if their mothers had a high level of education, and if they had relatively few brothers and sisters.

Given these relationships between children's outcomes in these domains and family income and maternal education, and the relatively low income and levels of education of the families in this particular community, the relatively strong performances of the children on some outcomes, and low performance on others, are especially noteworthy. It suggests that there must be other aspects of family and community life that have influenced children's outcomes. We examine these factors in the next section.

IV. What Families and Communities in Winnipeg (School Division No. 1) Can Do to Improve Children's Outcomes

Many studies of childhood outcomes have been based on investment theory, an economic theory that supposes that children receive an endowment from their parents. This includes biological attributes and a cultural endowment determined by their parents' norms, values, and preferences; their income and wealth; and their access to resources. Parents invest time and money in their children, primarily through expenditures on education and health care.

Although the emphasis of investment theory has been on the transmission of earnings and wealth from one generation to the next, the idea that children's social, emotional, and intellectual development depends on parents' investments is firmly rooted in the child development literature. These investments can include, but are not limited to, time spent with children.[8]

Other theories suggest that childhood outcomes result from family and parenting practices. Children are less likely to have behaviour problems or poor cognitive development if their parents are supportive, responsive, and affectionate.

Parents who are depressed or severely stressed are more likely to be tense and irritable with their children, and become less engaged in activities that contribute to their emotional and intellectual development. Marital relations become strained, and the overall ability of the family to function as a cohesive unit becomes compromised. These pressures also affect children's development.

Recent research based on the National Longitudinal Survey of Children and Youth,[9] as well as analyses of the UEY communities' data reported here, consider the influence of both family processes and community factors on childhood outcomes.

The most important family processes include the parents' "style" of parenting, maternal depression, the cohesiveness or adaptability of the family, and the extent to which children are regularly engaged with learning activities.

Child care also plays a critical role. Many children have better outcomes if they have quality daycare, especially those from families of low socio-economic status.

Parents' ability to provide a supportive environment can be either helped or hindered by the neighbourhood and wider community. The quality and safety of the neighbourhood is important, but social factors also play a role.

Subsequently, we are also interested in the degree of social support available to parents, and the extent to which parents have access to information and support through a strong network of friends and colleagues – factors embodied in the term "social capital." Social support and high levels of social capital are easier to build in a community when the population is not transient; thus, we also

[8] McCain, M.N., & Mustard, J.F. (1999). *Reversing the Real Brain Drain: Early Years Study Final Report.* Publications Ontario.

[9] Willms, J. D. (in press). *Vulnerable Children: Findings from Canada's Longitudinal Study of Children and Youth.* University of Alberta Press.

expect that child development may be affected by the extent to which the population is stable.

Finally, children's development is more likely to flourish if families have access to educational, cultural and recreational resources. These are important not only because they contribute directly to children's development, but also because they foster social support and increase social capital within the community.

As we have seen in the previous two sections, the children in Winnipeg (School Division No. 1) generally scored as well as children in the EDI-16 sample on the five outcome domains, and generally approached national standards of performance on the NLSCY outcomes measures.

This is at odds with what one might expect, given the range of socio-economic conditions in which they are living. Many of the children live in less affluent families than other Canadian children, and on average their parents have lower levels of education, and less regular, full-time employment. The percentage of children living in single-parent homes is higher than the Canadian average. Therefore, factors other than those associated with their immediate socio-economic status must also be at play.

The strategy was to combine a large number of family and community variables into ten indicators that are essential for successful child development. These indicators had to meet two criteria:

- There had to be evidence that the indicators were related to children's developmental outcomes, either from previous literature or through analyses of the UEY and NLSCY data.

- They had to be amenable to change through the efforts and actions of families and communities, through the support of community and volunteer agencies, and through social policy at the local, provincial and national levels.

In this section, the ten indicators are described; the results of the analyses with the UEY data are presented, which give some indication of the relative importance of these factors; and the scores on these indicators for the Winnipeg (School Division No. 1) community are shown.

A. Ten Indicators of family and community success

Each of the indicators is presented from 0 to 10, with 10 being the highest positive score.

1) Positive Parenting

This indicator was based on research that has shown that children have better developmental outcomes when their parents monitor their behaviour, are responsive to their needs, and encourage independence with a democratic approach.

This "style" of parenting, called "authoritative" parenting, stands in contrast to "authoritarian" parenting, characterised by parents being highly controlling and somewhat harsh in their approach to discipline, and "permissive" parenting, characterised by parents being overly-indulgent and setting few limits for behaviour.[10]

The scale includes items assessing the extent of positive interactions – how often the parents praise the child, how often they talk and play with them, and how often they laugh together. It includes items pertaining to whether parents are consistent and rational in their approach.

[10] Baumrind, D. (1991). The influcence of parenting style on adolescent competence and substance abuse. Journal of Early Adolescence, 11(1), 56-95.

For example, parents were asked about situations when their child was misbehaving: were they likely to raise their voice, scold or yell at their child, calmly discuss the problem, or discuss alternate ways of behaving? Did they often have to punish their child repeatedly for the same behaviour? Did their punishment depend on the mood they were in?

2) Parental Engagement

This indicator measures the extent to which parents are engaged with their child in learning activities. It includes information on whether and how often parents tell stories to their children, teach them letters and numbers, teach them how to read, and encourage them to use numbers in their day-to-day activities. It also measures whether and how frequently children look at books and magazines, discuss them with their families and friends, and write or pretend to write with markers or pencils.[11]

3) Family Functioning

The concept of family functioning refers mainly to the cohesiveness and adaptability of the family. It concerns how well the family functions as a unit, more so than the relationships between spouses or between parents and their children. A number of studies have shown that family functioning is related to children's developmental outcomes, especially children's behaviour.

In this study, it is assessed with twelve items pertaining to a family's ability to communicate, make decisions and solve problems as a group, discuss feelings and concerns, get along together, and feel accepted for who they are.

4) Maternal Mental Health

The well-being of parents affects their parenting style and ability to respond to and engage their children in various learning activities[12]. Mothers' well-being has a stronger effect on children's outcomes than fathers' well-being.

This indicator was based on twelve items that are commonly used to measure depression. For example, it includes questions about whether the person regularly experiences feelings of depression and loneliness, crying spells, low energy levels, an inability to concentrate and sleep, and a sense of being disliked by others. The scores were coded such that high scores indicate positive mental health; that is, the absence of depressed feelings.

5) Social Support

The level of social support available to parents affects their well-being, and indirectly affects their ability to function as parents and as role models within their family and community.

This indicator measures the level of support available to the respondent, and describes how much support that person receives from a community of friends and family members.

To determine this, respondents were asked whether they could get help in various situations, including emergencies; whether they were able to confide in and seek advice from others; whether they felt close to another person; and whether they felt they were a member of a group of people whose attitudes and beliefs they share.

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[11] McCain, M.N., & Mustard, J.F. (1999). *Reversing the Real Brain Drain: Early Years Study Final Report.* Publications Ontario.

[12] Brooks-Gunn, J., Duncan, G.J., & Britto, P.R. (1999). Are Socioeconomic Gradients for Children Similar to Those for Adults? Achievement and Health of Children in the United States. In D.P. Keating's & C. Hertzman's (Eds.) *Developmental Health and the Wealth of Nations.* The Guilford Press. New York.

6) Social Capital

A separate but related indicator, social capital is a measure of the level of support available collectively to groups within a community. Thus, it comprises information about the ability of neighbours to work together to solve problems, help each other, watch out for one another's children, and provide children with role models outside their immediate families.

7) Neighbourhood Quality

This indicator gauges the parents' perception of their neighbourhood as a place to raise children. It measures features such as cleanliness, safety, quality of schools and nursery schools, adequacy of facilities for children (such as pools and playgrounds), health facilities, and the level of involvement of residents. It also asks people to rate their present neighbourhood in comparison with the one they had lived in previously.

8) Neighbourhood Safety

This indicator assesses the level of the parents' concern for children's safety in their neighbourhood. For example, parents were asked about the safety of parks and other play-spaces, crime rates, problems with older children in the neighbourhood, and whether they worried about children playing outside during the day.

9) Use of Resources

This indicator measures the use of *recreational facilities*, including parks, trails, play-spaces, skating rinks, pools, camping areas, skiing facilities, amusement parks, and community centres; *educational services*, such as libraries, science centres, family resource centres, and drop-in programs; and *cultural resources*, such as art museums, plays, musical performances, sports events, and movies.

10) Residential Stability

This factor was derived from a factor analysis of four variables measured as part of the 1996 Canadian census that assessed the degree of transience of the local population. These included the proportion of people who had moved in the past five years or the past year, as well as the percentages of single parents and elderly people in the neighbourhood. It was scaled in positive terms, such that a high score indicates greater stability. The average score for all enumeration areas in Canada is 5 on the 10-point scale.

B. The relationship between neighbourhood factors and children's outcomes

In the third section, we used statistical tools to estimate the relationships between family background factors and children's readiness to learn in three developmental domains: the cognitive domain, the behavioural domain, and physical health and well-being.

In this section, we extend that analysis to include the ten family and neighbourhood factors described previously. This is a fairly conservative test of the effects of these factors, as the analysis is essentially asking, "What are the effects of these factors, after taking account of children's family backgrounds?"

As in Section III, the results are presented as odds-ratios (see the Inset in Section III). For the ten scales describing family processes and neighbourhood factors, these provide an estimate of the effect associated with a one-point increase on the respective scale. The results, which are based on the combined data from the first five UEY communities, are presented in Table 4.1.[13]

[13] The co-efficients in Table 4.1 are slightly lower than in table 3.1 because community factors are correlated with family background. For example, a family with a higher income generally lives in a relatively safer neighbourhood with a higher neighbourhood quality.

Table 4.1 – The Relationship Between Readiness to Learn Outcomes and Family Background, Family Processes, and Community Factors

	Five UEY Communities Children's Outcomes		
	Cognitive	Behavioural	Physical Health and Well-being
Family Background			
Family Income ($10,000 units)	**1.14**	**1.08**	1.02
Mother's Education (years)	**1.07**	0.99	1.07
Father's Education (years)	1.04	1.00	**1.13**
Mother Not Working Outside Home	0.97	**1.24**	1.13
Father Not Working Outside Home	1.18	**1.38**	1.17
Single-Parent Family	1.01	1.00	0.70
Number of Brothers and Sisters	0.92	0.96	**0.84**
Family Processes			
Positive Parenting Practices	1.07	**2.31**	**1.37**
Engagement in Learning Activities	**1.10**	1.01	1.08
Family Functioning	0.98	1.05	**0.86**
Maternal Mental Health	0.98	**1.12**	0.99
Community Factors			
Social Support	1.02	**0.87**	1.07
Neighbourhood Quality	1.03	1.01	1.00
Safe Neighbourhood	1.02	**1.12**	0.93
Social Capital	1.01	1.06	1.06
Use of Resources	**1.11**	1.04	1.10
Residential Stability	**1.06**	1.02	**1.13**

NLSCY in relation to 3 EDI domains for the first 5 UEY communities.
Note: Figures in bold text are statistically significant at p<.10.

Of the ten factors, three have statistically significant relationships with the cognitive domain: engagement in learning activities, use of community resources, and residential stability.

The engagement in learning results suggest that a child in a family with a rating of 6.0 on the 10-point scale would be 10% more likely to be ready to learn in the cognitive domain than a child living in a family with a rating of 5.0 (or a family rated 5.0 instead of 4.0, etc.). This means that parents who spend time reading to their children, and teaching them numbers and letters, have children with better cognitive scores.

An increase of one point in "use of community resources" was associated with an 11% increase in cognitive scores. In other words, families that make use of various recreation, educational, and leisure facilities, such as pools, play spaces, libraries, drop-in programs, art museums, and movies, have children with better cognitive scores.

Similarly, an increase of one point in residential stability was associated with a 6% increase in scores, which indicates that families with fewer moves have children with higher cognitive scores.

For the behavioural domain, positive parenting was by far the most important factor. A one-point increase on the positive parenting scale was associated with a dramatic increase in good behavioural outcomes of 131%. This means that parents who monitor children's behaviour, are responsive to their needs, and encourage independence, are much more likely to have children without behaviour problems.

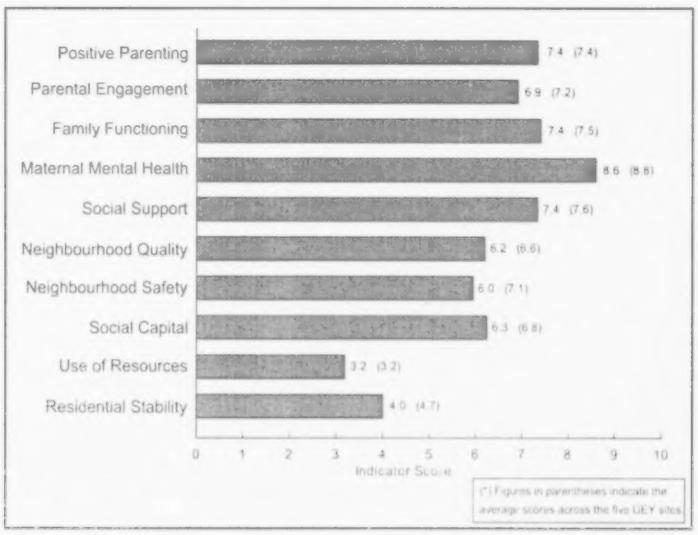
Two other factors had statistically significant and positive effects: the mental health of the mother and living in a safe neighbourhood. Each of these factors was associated with a 12% increase in the likelihood of a child being ready to learn in the behavioural domain. This means that a mother with good mental health and families who lived in safe neighbourhoods had children with fewer behavioural problems.

Social support had effects contrary to expectations. This may have arisen because parents whose children have behavioural problems may be more aware of the social support available to them, and therefore reported higher levels of support.

Residential stability also had a positive effect, meaning that children living in stable neighbourhoods were more likely to have positive health outcomes. The effects of family functioning were anomalous in this case, suggesting that families who have a child with health problems are more likely to be cohesive and adaptable.

Finally, for physical health and well-being, positive parenting again emerged as the most important factor. The analysis indicates that a one-point increase in the positive parenting scale is associated with a 37% increase in the likelihood of a child being ready to learn in this domain.

Figure 4.1 – Community Indicator Scores for Winnipeg (School Division No. 1)



NLSCY data

C. Community indicator scores for Winnipeg (School Division No. 1)

Figure 4.1 displays Winnipeg (School Division No. 1) scores for each of the ten indicators described in this section. The figures in parentheses indicate the average scores for the five UEY communities.

The scores for Winnipeg (School Division No. 1) were equal to or lower than the average for all ten indicators.

Scores for positive parenting and use of resources were equal to the UEY averages. Indicators of family functioning, maternal mental health, and social support were only slightly lower than average (-.1 or -.2).

Indicators of parental engagement (-.3), neighbourhood quality (-.4), neighbourhood safety (-1.1), and residential stability (-.7) were substantially lower than the UEY average.

These indicators help to explain why the children of the Winnipeg (School Division No. 1) community scored relatively low on some of the outcomes measured.

Parenting skills are of critical importance during the early years, and while this community scored high on positive parenting, it scored somewhat lower on parental engagement.

Also, given the lower scores on community factors that support parents' ability to parent, such as social support and social capital, it is not surprising to find a somewhat lower score on parental engagement.

The following maps illustrate the distribution and location of preventive health services, community-centred resources, parent- and family-centred resources, and child centred resources.

The lower scores on neighbourhood quality and safety indicate that parents' concern for their children's welfare may prevent children from engaging in neighbourhood activities that would normally contribute to their cognitive, behavioural, and physical health.

As described, there are ten indicators of family and community success. Each indicator scale has a range from 0 to 10, with 10 being a positive score. A total score out of 100 can be calculated for each community. The total score out of 100 for Winnipeg (School Division No.1) is 63.4, which is 3.5 points below the average of 66.9 for the five UEY communities.

Because of the low average scores in all five UEY communities on the use of resources, this variable was further explored in each community to determine whether the problem stems mainly from a lack of availability of the resources. For each of the three types of resources, parents were asked, "Are most of these resources located within walking distance or within a short drive or bus ride?" The results for Winnipeg (School Division No. 1), presented in Figure 4.6, indicate that availability is an issue for educational resources but not for cultural or recreational resources.

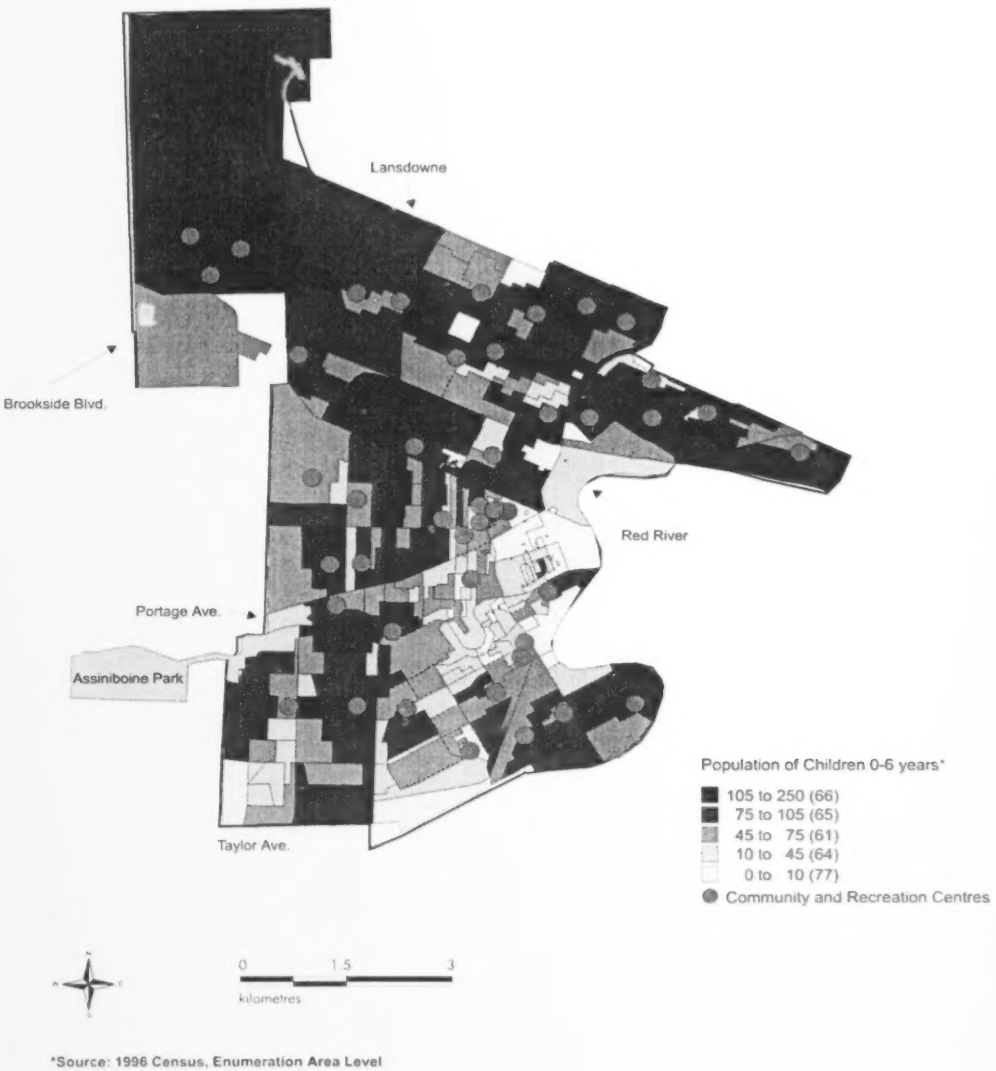
The NLSCY data also covered daycare. Early childhood programs, such as those offered at daycare, can increase a child's readiness for learning, thereby enhancing his or her lifelong academic and personal development.

Figure 4.2
Preventative Health Services

*Source: 1996 Census

Figure 4.3

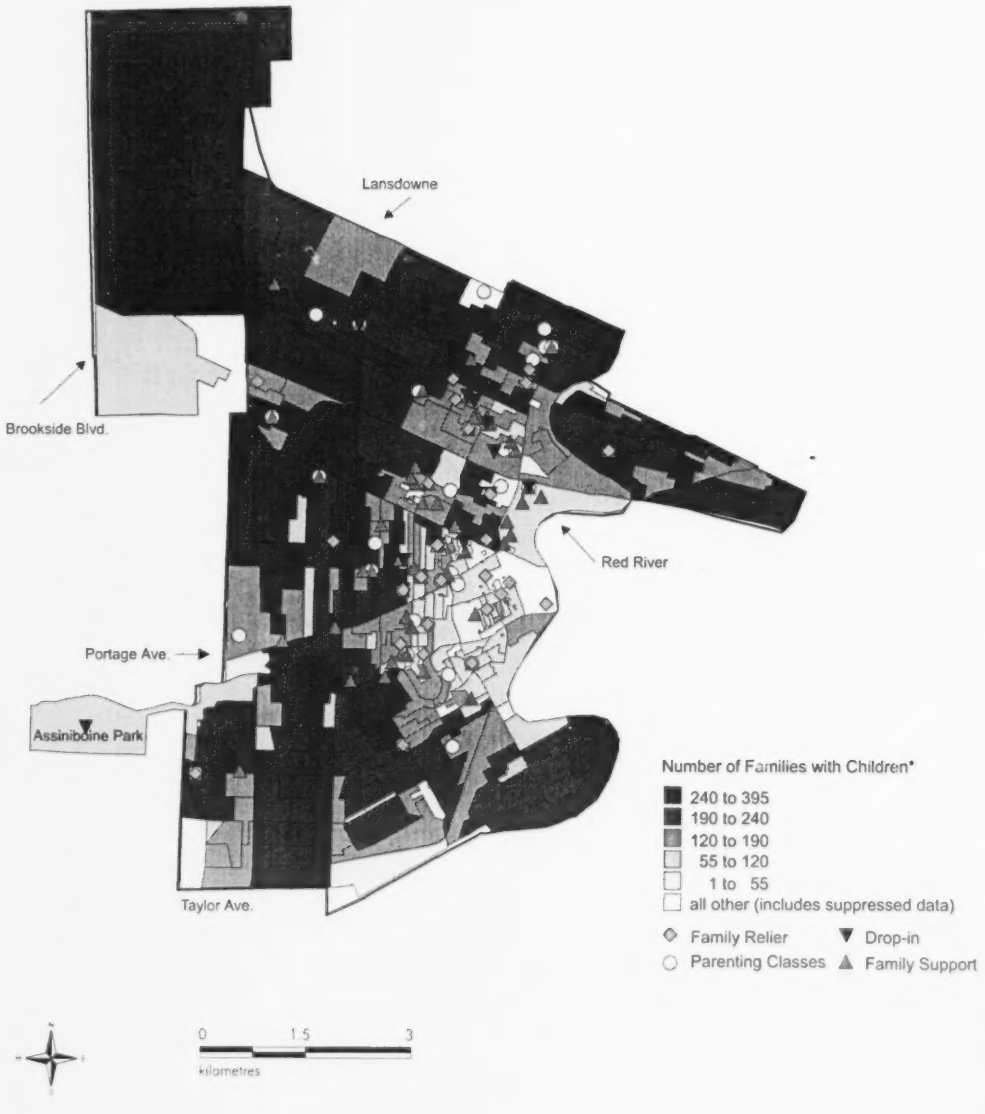
Community Centred Resources in Winnipeg (School Division No. 1)



*Source: 1996 Census, Enumeration Area Level

Figure 4.4

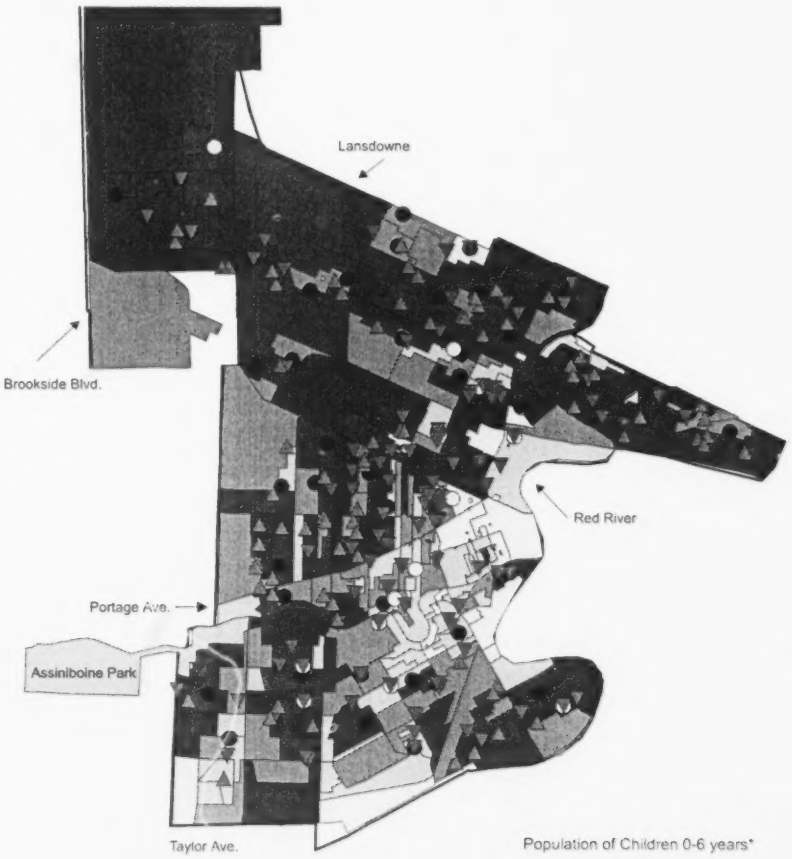
Parent and Family Centred Resources in Winnipeg (School Division No. 1)



*Source: 1996 Census

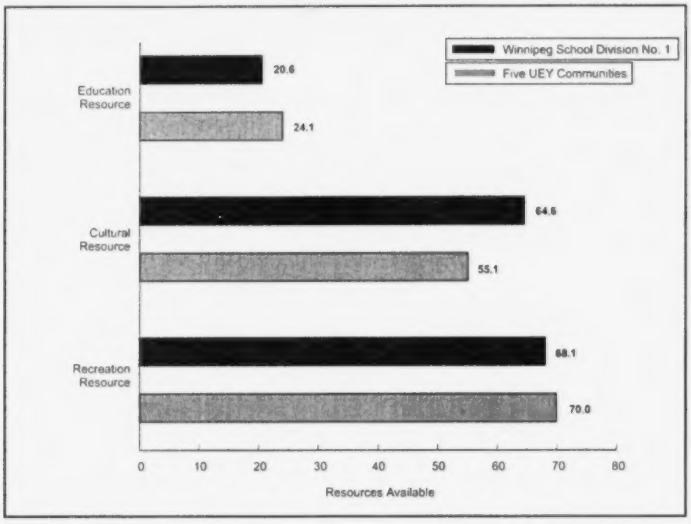
Figure 4.5

Child-Centred resources in Winnipeg (School Division No. 1)



*Source: 1996 Census

Figure 4.6 – Availability of Resources for Winnipeg (School Division No. 1) and the Five UEY Communities



NLSCY for Winnipeg (SD1) and national NLSCY (cycle 3).

But for these programs to be effective, they need to be developmentally appropriate and responsive to the experiences, backgrounds and needs of the children.[14] Research suggests that, regardless of a child's socio-economic status, four types of resources contribute to optimal child development: childcare centres, pre-schools, nursery schools, and kindergartens.

Moreover, research based on the first cycle of the NLSCY suggests that receiving daycare, either licensed or unlicensed, has positive effects on the language skills of children from low-income families. However, children from relatively affluent families tend to fare equally well across various types of care arrangements.[15]

In 1996-97, according to NLSCY, about one-half (48.4%) of the population of 5- and 6-year-old children in Canada received care for at least part of the day by someone other than their parents. In contrast, 41.1% of the children in Winnipeg (School Division No. 1) received care by someone other than their parent.

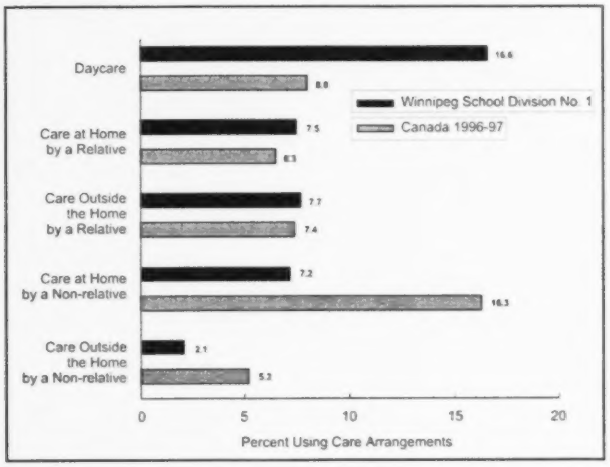
Figure 4.7 displays the percentage of children in differing types of care arrangements for the Winnipeg (School Division No. 1) community, compared with the figures for Canada for 1996-97, derived from NLSCY.

The children in this community were twice as likely to receive daycare, compared with children living elsewhere in Canada, and were slightly more likely to receive care by a relative, either inside or outside the home. Only 7.2% of the children in this community were cared for at home by a non-relative, whereas this is the most popular type of care arrangement in Canada.

[14] Doherty, G. (1997). (Zero to six: the base for school readiness.) Hull, Quebec: Human Resources Development Canada, Strategic Policy, Applied Research Branch Research paper R-97-8E.

[15] Kohen, D., Hertzman, C., & Willms, J. D. (in press). The importance of quality child care. In J. D. Willms (Ed.), *Vulnerable Children: Findings from Canada's National Longitudinal Study of Children and Youth*. University of Alberta Press.

Figure 4.7 – Types of Care Arrangements



NLSCY for Winnipeg (SD1) and national NLSCY (cycle 3)

Winnipeg (School Division No. 1), early childcare with enhanced developmental programming may benefit children from low-income areas.

To summarise, the members of the Winnipeg (School Division No. 1) community have a number of strengths. On average, parents tend to have strong parenting skills, and families are functioning fairly well under what appear to be difficult circumstances. The community has a fairly high use of cultural and recreational resources.

However, it is a relatively transient community and thus has low social cohesion, which is reflected by its relatively low scores on social capital and other neighbourhood indicators.

V. Looking Forward

Overall, the children of this community showed strong signs of positive development and readiness for learning. Parents had relatively strong parenting skills, and the families were functioning quite well despite living in relatively less safe neighbourhoods with little social support.

The community had relatively low scores on wider community indicators describing its levels of social support, social capital, and the quality and safety of its neighbourhoods.

Although many Canadian communities share at least some of these broader characteristics, each community also exhibits a variety of unique features that sets it apart from others.

This is one of the reasons community-based research is so important. Research allows a community to understand how well its youngest citizens are developing and lends insight into how the obtained results came about. Investments for families and children, as well as for children's development, can be monitored over time so that effectiveness and efficiency of community effort can be improved.

This community can take pride in the success of its youngest children; however, there is room for improvement, particularly in the areas of literacy, general cognitive development, and behaviour.

The results from the EDI were inconsistent with the results from the direct assessments of the children. This may be because the EDI presents the range of outcomes within a community, which may be different from the range of outcomes when all children in Canada are assessed.

A. What Makes Winnipeg (School Division No. 1) Unique?

Several features stand out as unique to Winnipeg (School Division No. 1). First, this community exhibits considerable diversity in terms of culture and socio-economic backgrounds. Second, its parenting capabilities are generally strong, especially in light of the fact that there are many very low-income areas in the community. Third, the community scored low on all of the community indicators deemed important to child development.

Probably the most essential issue that needs to be tackled in this community is children's early language and literacy skills. These skills are critical for school success.

A key factor for improving early language and literacy skills is the quantity and quality of language to which a child is exposed. For example, children whose mothers talk more with their children learn new words at a faster pace than children whose mothers do so less.

It is less obvious how to increase children's exposure to language. For some children, attending high-quality child care can help improve these skills. Another essential factor is parents' engagement with the child in literacy-related activities, such as storytelling, reading to the child, and playing board games.

An essential issue in communities composed of families with diverse cultural and economic backgrounds is to ensure that children are not segregated along socio-economic or ethnic lines. As was evident in the map displaying socio-economic status (Figure 1.3), there is a high degree of residential segregation. The

school system has to ensure that children from lower-income areas of Winnipeg are not further segregated between schools or within schools through special programs such as pull-out remedial programs or specialized programs that mainly attract children from affluent families.

Finally, neighbourhood safety and quality is a concern in this community, which it needs to address before it can make progress on other aspects of community development.

The community can take action to increase levels of social support and social capital, and this is likely to contribute to improving children's outcomes.

For example, over 30% of the children in this community live in single-parent families. It is especially difficult for these parents to take advantage of the community resources that are available. For some of these parents, having a neighbour who takes their child to swimming lessons once a week may be a tremendous form of social support; for others, it might simply mean having an affordable caregiver.

B. Summary

Winnipeg (School Division No. 1) is one of the first communities participating in the UEY initiative. Through this initiative, valuable lessons are being learned about the needs and strengths of communities with different economic, social, and physical characteristics. With respect to early childhood development, we are also learning how they are working to improve children's outcomes, as well as the relative success (or lack thereof) of their efforts.

Communities will determine how their citizens will work together to improve children's early developmental outcomes. Results from the UEY initiative will inform the discussion in the community for future action.

At the same time, it is a societal responsibility – of governments, educators, community agencies, neighbourhoods, and families – to make sure improvements take place for all children. Strategies that require the community to look at itself as a whole community, as well as neighbourhood by neighbourhood, will likely have more enduring effects. UEY is able to provide research results to support both.

For example, neighbourhood by neighbourhood, families may improve their outdoor play-spaces, and on a community level, concerned agencies and organisations could improve community-wide strategies to integrate disadvantaged groups. As communities document their efforts, as well as their results, effective practices will be identified.

Any community's response must consider its unique features. The importance of a co-ordinated approach involving families, teachers, and all community members must be emphasised because each has been shown to be important in enhancing a child's development. Governments, community institutions, schools, and the voluntary sector in Winnipeg (School Division No. 1) must continue to work together, as each can make a valuable and important contribution. Support for families with children from the larger community network is critical.

Appendix A

Manitoba's Commitment To Early Childhood Development (April 2001)

Since April 2000, Manitoba has increased investments in early childhood development by approximately $29 million. Through a partnership with regional early-years teams and parent–child centred coalitions, the province is developing a continuum of services to support Manitoba children and families.

In March 2000, the premier created Healthy Child Manitoba to help improve the well-being of children, families, and communities, with a special focus on pregnant women and preschool children. Healthy Child Manitoba signals a new way of working together and a commitment to concrete action for early childhood development. The program builds on the existing foundation and creates new initiatives to support the early years.

Here are some of the components of Manitoba's Early Childhood Development (ECD) Continuum:

Healthy Baby

Starting in July 2001, the Manitoba Prenatal Benefit will help income-eligible pregnant women meet their extra nutritional needs during pregnancy. Pregnant women and new mothers will also have access to expanded community support programs.

BabyFirst

BabyFirst provides a three-year home visiting program for newborns and their families, delivered through the community health system. The 2001 provincial budget expands this service to more families.

STOP FAS

STOP FAS is a three-year mentoring program for women at risk of having a child with fetal alcohol syndrome or fetal alcohol effects (FAS/FAE). Following from the success of two Winnipeg sites, STOP FAS was recently expanded to Thompson and The Pas in northern Manitoba.

Parent–Child Centred Approach

This approach brings resources together through community coalitions that support parenting, improve children's nutrition and literacy, and build capacity for helping families in their own communities. Each parent–child centre coalition determines the unique form that activities will take, based on the needs of the community.

Child Day Care

Since April 2000, funding for Manitoba's childcare program has increased by over 27%, improving salaries for early childhood educators and providing additional subsidies for children. Increased funding has also been provided to integrate more children with disabilities into the childcare system and to expand the number of licensed childcare spaces.

Early Start

To enhance children's readiness to learn before entering school, Early Start provides a three-year home visiting program for families with children who have special social needs and are currently attending licensed child care.

Early Childhood Development Initiative

The Early Childhood Development Initiative (ECDI) will help school divisions and districts to

provide intersectoral services for preschoolers. ECDI will improve preschoolers' readiness to learn.

Children's Special Services

Community-based services are provided to an increased number of families who support children with a mental and/or physical disability in their own homes.

National Child Benefit Restoration

Families receiving Employment and Income Assistance will have more income to help them to provide their young children with the support they need. As of July 2001, families with children aged 6 and under do not have the National Child Benefit reduced from their provincial benefits. They receive the full amount of this benefit for those children, including the federal increases, which occurred in July 2001.

Appendix B

A Look at Winnipeg

Geography

Winnipeg lies in the middle of the Red River Valley, where the Assiniboine River converges with it. Repeated flooding deposited much of the fine Red River silt along the floor of the sprawling valley, leaving behind rich black clay soils that give the Red River Valley around Winnipeg some of the best agricultural lands in the world.

This city of 620,000 people is known as one of the greener centres in the country. Towering elm trees line many streets in the downtown areas and in older residential areas nearby. The suburbs are dotted with parks and green spaces, and residential neighbourhoods are lush with mature trees and bushes.

History

Now the capital of Manitoba, Winnipeg is located in the geographic heart of North America. For thousands of years, the area was a meeting place for many native nations on the prairies. Native peoples congregated here for celebrations and ceremonies, as well as to trade their wares.

In 1738, a fur-trading centre here attracted trappers and voyageurs. Lord Selkirk's settlers arrived in 1812 and formed the first permanent settlement, which was incorporated as a city in 1873.

Winnipeg boomed following the arrival of the Canadian Pacific Railway in 1885. A flood of immigrants, high wheat prices, and improved farming techniques made Winnipeg the wholesale, administrative, and financial centre of Western Canada.

Economic Base

The city's strategic central location and highly skilled workforce make it a major financial, manufacturing, transportation, business, and retail centre. With one of the only 24-hour Canadian airports and major rail and road connections east, west and south, goods from Winnipeg can reach anywhere in the world within 48 hours.

Winnipeg is the headquarters of Canada's grain industry and home to the head office of the Canadian Wheat Board and of numerous major grain companies. The city is also the headquarters to many national and international financial and insurance companies.

Winnipeg's secondary manufacturing sector is one of the most diverse in Canada, and one of the fastest growing. This sector has experienced growth nearly 10 times the national average since 1991. Winnipeg is a major food and beverage processing centre, Western Canada's largest aerospace centre, and a growing venue for film and television production.

Support for Families with Children

Two of the resources available to Aboriginal people is are the Aboriginal Centre of Winnipeg Inc. (ACWI) and the Aboriginal Health and Wellness Centre. The ACWI is a place to gather and to promote innovative ideas in education, economic development, social service delivery, and training. Through ACWI participating organizations have established stronger relationships and mechanisms to co-operate more fully in the design and delivery of services for Aboriginal people in Winnipeg.

The Aboriginal Health and Wellness Centre's philosophy is founded on traditional values and perspectives. A variety of resources, including various services and programs are available to identify and support the aspirations, needs and goals of Aboriginal peoples, and thus the community, through access to both traditional and Western resources.

Also of note is the Elmwood Community Resource Centre (ECRC), located in an area viewed as inner-city Winnipeg. ECRC is a unique partnership between West Elmwood Residents Association, the Chalmers Neighbourhood Project, and the Elmwood Interagency Network, resulting in a centre designed by residents for residents, with business and service providers providing support through shared resources and in-kind donations.

In a holistic, cooperative approach, residents have easy access to services, programs, information, and resources that address needs they themselves have identified:

- A Healthy Child Clinic and a Health Drop-in
- A play program for mothers and preschoolers
- A parent resource counsellor and literacy facilitators
- A community kitchen
- A book- and toy-lending library
- A community phone
- A drop-in centre
- A meeting room
- A community billboard
- The Elmwood Working Woman's Clothes Closet
- A quiet room to study in
- An adult literacy program
- Graffiti Busters, a volunteer graffiti

removal program, and Adopt-A-Block, a graffiti removal program

- The Five Day Club for 4 to 12 year olds
- The Our Kidz group for 6 to 12 year olds
- The West Elmwood Community Watch
- The Community Skills Bank
- Job Re-entry Strategies
- A Web site at http://www.mts.net/~ledgwins/ecrc/

Among the resources that can help parents develop skills are family support centres, parent relief programs, parenting classes and programs, and drop-in programs. In the community, there are 68 parenting classes and programs, 30 relief programs, 100 support programs, and 14 drop-in programs.

A good local example of this support is the Andrews Street Family Centre (ASFC), in the north end of Winnipeg. A multi-service family and neighbourhood support centre, it builds on the capacity of residents to provide local solutions to issues related to family and neighbourhood development.

The ASFC brought together several complementary programs in the William Whyte community. It focuses on promoting family support and stability, child development (particularly for children under the age of 7), and the creation of a co-ordinated framework for local support and community ownership to better address neighbourhood issues.

Here are some of the programs it offers:

- A parent–child drop-in centre
- Parenting classes
- A single-fathers group
- A weekly newsletter and monthly calendar
- Sharing circles led by Aboriginal elders
- Free workshops on, for example, welfare rights, smoking cessation, and breast self-examination
- The Parents Helping Parents Program for at-risk teen parents
- The Well-Child Clinic
- Prenatal classes
- The Community Kitchen
- A food-buying club
- Food bingo programs
- A clothing exchange
- Laundry facilities
- Telephone access

Child care in Winnipeg (School Division No. 1)

In 1983, the Government of Manitoba proclaimed the *Community Child Day Care Standards Act* and introduced licensing regulations that define minimum standards for childcare facilities. These requirements are monitored to ensure that each licensed childcare facility provides the following essential elements:

- An environment that contributes to the health, safety, and well-being of children
- A program of activities to promote the physical, social, emotional, and intellectual development of children
- An opportunity for parental involvement in the operation or management of a childcare centre

There are 130 licensed childcare facilities and 79 licensed family day-care homes in Winnipeg (School Division No. 1). These are centres that offer services and programs for infants on up to school-aged children.

In addition, Winnipeg (School Division No. 1) offers a nursery program in each of the 59 elementary schools, which is equivalent to Ontario's junior kindergarten program. (In each school, children can advance to kindergarten with instruction in language arts, mathematics, science, social studies, physical education, health, music, and art.)